



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 177145

TO: David Lukton
Location: REM/3B75/3C18
Art Unit: 1654
_____, 2006

Case Serial Number: 10/626719

From: P. Sheppard
Location: Remsen Building
Phone: (571) 272-2529

sheppard@uspto.gov

Search Notes

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248

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SEARCH REQUEST FORM
(STIC)

Requestor's Name: David Lukton Examiner number: 71263 Date: 1-20-06

Art Unit: 1654 Phone number: 571-272-0952 Serial Number: 10-626719

Mail Box: 3-C-18 Examiner Rm: 3-B-75 Results format: paper

Title: SHORT-WARP PEPTIDE DYE CONJUGATE AS CONTRAST AGENT
FOR OPTICAL DIAGNOSTIC

Applicants: LICHA, KAI; BECKER, ANDREAS; SEMMLER,
WOLFHARD; WIEDENMANN, BERTRAM; HESSENIUS, CARSTEN;
VOLKMER-ENGERT, RUDOLF; SCHNEIDER-MERGNER, JENS

Earliest priority date: 4/9/99

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVAFVDNTRLRKQMAVKYKLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

A_Geneseq_21:*

1: Geneseqp1980s:*

2: Geneseqp1990s:*

3: Geneseqp2000s:*

4: Geneseqp2001s:*

5: Geneseqp2002s:*

6: Geneseqp2003as:*

7: Geneseqp2003bs:*

8: Geneseqp2004s:*

9: Geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	150	100.0	28	5	ADH68789
2	141	94.0	28	5	ADH68790
3	140	93.3	28	5	ADH68781
4	138	92.0	28	5	ADH68785
5	137	91.3	28	5	ADH68787
6	137	91.3	28	5	ADH68784
7	137	91.3	28	5	ADH68782
8	137	91.3	28	5	ADH68786
9	136	90.7	28	1	AP10172
10	136	90.7	28	1	AP71039
11	136	90.7	28	2	AA34943
12	136	90.7	28	2	AA40272
13	136	90.7	28	2	AA53111
14	136	90.7	28	2	AA53109
15	136	90.7	28	2	AA53110
16	136	90.7	28	2	AA87092
17	136	90.7	28	2	AA83785
18	136	90.7	28	2	AA97810
19	136	90.7	28	2	AA93023
20	136	90.7	28	2	AA65188
21	136	90.7	28	2	AAW06120
22	136	90.7	28	2	AAW06119
23	136	90.7	28	2	AAW06114
24	136	90.7	28	2	AAW06113

25	136	90.7	28	2	AAW06121	Aaw06121 Pig VIP p
26	136	90.7	28	2	AAW06122	Aaw06122 Goat VIP
27	136	90.7	28	2	AAW06115	Aaw06115 Dog VIP p
28	136	90.7	28	2	AAW06112	Aaw06112 Sheep VIP
29	136	90.7	28	2	AAW37791	Aaw37791 Vasoactiv
30	136	90.7	28	2	AAW71677	Aaw71677 Vasoactiv
31	136	90.7	28	2	AAAY30769	Aay30769 Vasoactiv
32	136	90.7	28	2	AAAY44196	Aay44196 Human vas
33	136	90.7	28	3	AAAY94560	Aay94560 Vasoactiv
34	136	90.7	28	4	AAAB85707	Aab85707 Peptide h
35	136	90.7	28	4	AAAB85710	Aab85710 Peptide h
36	136	90.7	28	4	AAAB91279	Aab91279 Vasoactiv
37	136	90.7	28	4	AAAB91278	Aab91278 Vasoactiv
38	136	90.7	28	4	AAAB12028	Aab12028 Porcine v
39	136	90.7	28	4	AAAB37111	Aab37111 Human vas
40	136	90.7	28	4	AAAG70459	Aag70459 Vasoactiv
41	136	90.7	28	4	AAAB50845	Aab50845 Human pro
42	136	90.7	28	4	AAAU09653	Aau09653 Porcine i
43	136	90.7	28	4	AAAB45614	Aab45614 Native va
44	136	90.7	28	5	AAAE19604	Aae19604 Human ste
45	136	90.7	28	5	AAAE19627	Aae19627 Human vas

ALIGNMENTS

RESULT 1

ADH68789

ID ADH68789 standard; peptide; 28 AA.

XX

AC ADH68789;

XX

DT 25-MAR-2004 (first entry)

XX

DE Synthetic VIP analogue #96.

XX

KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;

KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

KW bladder; cervix.

XX

OS Synthetic.

XX

FN EP1170021-A2.

XX

PD 09-JAN-2002.

XX

PF 14-MAY-2001; 2001EP-00250164.

XX

PR 15-MAY-2000; 2000US-00571407.

XX

(SCHD) SCHERING AG.

XX

Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX

WPI; 2002-099222/14.

XX

New peptide-lanthanide chelate conjugates, useful in optical or

PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or

PT inflammation.

XX

XX

Claim 21; SEQ ID NO 99; 97pp; German.

XX

This invention describes novel conjugates of vasoactive intestinal

CC peptide (VIP), somatostatin, neurotensin or related peptides with

CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.

CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding

CC active ester. The conjugates can be administered topically or

CC intravenously. The use of the conjugates of the invention are claimed for

CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

CC by an optical detection method or for in vivo fluorescence diagnosis of

CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH6891-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

XX Sequence 28 AA;

Query Match 100.0%; Score 150; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 2.2e-12;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28
 DB 1 HWDVFTDNYTLRKQMAVKYLSILN 28
 |||||

RESULT 2
 ADH68790
 ID ADH68790 standard; peptide; 28 AA.

AC ADH68790;
 XX 25-MAR-2004 (first entry)
 XX Synthetic VIP analogue #97.
 XX conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

XX Synthetic.

XX EP1170021-A2.

PN 09-JAN-2002.

XX 14-MAY-2001; 2001EP-00250164.

XX 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

PA Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

XX New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

XX Claim 21; SEQ ID NO 100; 97pp; German.

XX This invention describes novel conjugates of vasoactive intestinal
 CC peptide (VIP), somatostatin, neurotensin or related peptides with
 CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
 CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding
 CC active ester. The conjugates can be administered topically or
 CC intravenously. The use of the conjugates of the invention are claimed for
 CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
 CC by an optical detection method or for in vivo fluorescence diagnosis of
 CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
 CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
 CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH6891-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

XX Sequence 28 AA;

Query Match 94.0%; Score 141; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.3e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28
 DB 1 HYDAVFTDNYTLRKQMAVKYLSILN 28
 |||||

RESULT 3

ADH68781

ID ADH68781 standard; peptide; 28 AA.

XX ADH68781;

DT 25-MAR-2004 (first entry)

XX Synthetic VIP analogue #88.

XX conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

XX Synthetic.

XX EP1170021-A2.

XX 09-JAN-2002.

XX 14-MAY-2001; 2001EP-00250164.

XX 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

PA Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

XX New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

XX PS Claim 21; SEQ ID NO 91; 97pp; German.

XX CC This invention describes novel conjugates of vasoactive intestinal

XX CC peptide (VIP), somatostatin, neurotensin or related peptides with

XX CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.

XX CC Preparation of the conjugates involves preparing a metal complex, then

XX CC coupling the product with a peptide by aminolysis of a corresponding

XX CC active ester. The conjugates can be administered topically or

XX CC intravenously. The use of the conjugates of the invention are claimed for

XX CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

XX CC by an optical detection method or for in vivo fluorescence diagnosis of

XX CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

XX CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

XX CC cervix. The claims also cover (i) a method of endoscopic in-vivo

XX CC fluorescence diagnosis, involving applying the conjugates topically by

XX CC spraying in the gastrointestinal tract, oesophagus or bladder or by

XX CC inhalation to the bronchi, optionally removing non-bonded excess

XX CC conjugates by washing and carrying out the endoscopic investigation by

XX CC local excitation at a wavelength of 250-450 nm and local detection of the

XX CC specific fluorescent radiation emitted by the conjugates and (ii) an

XX CC optical diagnostic composition for in vivo diagnosis of diseased tissue

XX CC regions, comprising at least one compound conjugated together with

XX CC conventional auxiliaries, carriers and/or diluents. The conjugate is also

XX CC enriched in the lymph nodes on intravenous administration, and can thus

XX CC be used to facilitate identification of the lymph nodes (by fluorescence)

XX CC during surgery. The conjugate is selectively enriched in diseased tissue

XX CC and after excitation with light of a suitable wavelength provides long-

XX CC lasting fluorescence (specifically having a life in the millisecond

XX CC range) in the 480-600 nm wavelength region (in which the human eye is

XX CC most sensitive), the life of the fluorescence of the conjugate exceeding

XX CC that of the autofluorescence of the tissue. The endoscopic diagnosis of

XX CC surface tumours is thus facilitated. The conjugates can be applied

XX CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide

XX CC conjugates described in the disclosure of the invention.

XX SQ Sequence 28 AA;

Query Match 93.3%; Score 140; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 4.4e-11;

Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HFDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4

ADH68785

ID ADH68785 standard; peptide; 28 AA.

XX AC ADH68785;

XX DT 25-MAR-2004 (first entry)

XX DE Synthetic VIP analogue #92.

XX KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;

XX KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

XX KW bladder; cervix.

XX OS Synthetic.

XX PN EP1170021-A2.

XX PD 09-JAN-2002.

XX PF 14-MAY-2001; 2001EP-00250164.

XX PR 15-MAY-2000; 2000US-00571407.

XX PA (SCHD) SCHERING AG.

XX XX

PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

XX PT New peptide-lanthanide chelate conjugates, useful in optical or

XX PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or

XX PT inflammation.

XX PS Claim 21; SEQ ID NO 95; 97pp; German.

XX CC This invention describes novel conjugates of vasoactive intestinal

XX CC peptide (VIP), somatostatin, neurotensin or related peptides with

XX CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.

XX CC Preparation of the conjugates involves preparing a metal complex, then

XX CC coupling the product with a peptide by aminolysis of a corresponding

XX CC active ester. The conjugates can be administered topically or

XX CC intravenously. The use of the conjugates of the invention are claimed for

XX CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

XX CC by an optical detection method or for in vivo fluorescence diagnosis of

XX CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

XX CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

XX CC cervix. The claims also cover (i) a method of endoscopic in-vivo

XX CC fluorescence diagnosis, involving applying the conjugates topically by

XX CC spraying in the gastrointestinal tract, oesophagus or bladder or by

XX CC inhalation to the bronchi, optionally removing non-bonded excess

XX CC conjugates by washing and carrying out the endoscopic investigation by

XX CC local excitation at a wavelength of 250-450 nm and local detection of the

XX CC specific fluorescent radiation emitted by the conjugates and (ii) an

XX CC optical diagnostic composition for in vivo diagnosis of diseased tissue

XX CC regions, comprising at least one compound conjugated together with

XX CC conventional auxiliaries, carriers and/or diluents. The conjugate is also

XX CC enriched in the lymph nodes on intravenous administration, and can thus

XX CC be used to facilitate identification of the lymph nodes (by fluorescence)

XX CC during surgery. The conjugate is selectively enriched in diseased tissue

XX CC and after excitation with light of a suitable wavelength provides long-

XX CC lasting fluorescence (specifically having a life in the millisecond

XX CC range) in the 480-600 nm wavelength region (in which the human eye is

XX CC most sensitive), the life of the fluorescence of the conjugate exceeding

XX CC that of the autofluorescence of the tissue. The endoscopic diagnosis of

XX CC surface tumours is thus facilitated. The conjugates can be applied

XX CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide

XX CC conjugates described in the disclosure of the invention.

XX SQ Sequence 28 AA;

Query Match 92.0%; Score 138; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 8.1e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5

ADH68787

ID ADH68787 standard; peptide; 28 AA.

XX AC ADH68787;

XX DT 25-MAR-2004 (first entry)

XX DE Synthetic VIP analogue #94.

XX KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;

XX KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

XX KW bladder; cervix.

XX OS Synthetic.

XX PN EP1170021-A2.

XX PD 09-JAN-2002.

XX XX

XX PF 14-MAY-2001; 2001EP-00250164.
XX PR 15-MAY-2000; 2000US-00571407.
XX PA (SCHD) SCHERING AG.
XX PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX DR WPI; 2002-099222/14.
XX PT New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX PS Claim 21; SEQ ID NO 97; 97pp; German.
XX CC This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptides with
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumors, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumors, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
CC cervix. The claims also cover (i) a method of endoscopic in-vivo
CC fluorescence diagnosis, involving applying the conjugates topically by
CC spraying in the gastrointestinal tract, oesophagus or bladder or by
CC inhalation to the bronchi, optionally removing non-bonded excess
CC conjugates by washing and carrying out the endoscopic investigation by
CC local excitation at a wavelength of 250-450 nm and local detection of the
CC specific fluorescent radiation emitted by the conjugates and (ii) an
CC optical diagnostic composition for in vivo diagnosis of diseased tissue
CC regions, comprising at least one compound conjugated together with
CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
CC enriched in the lymph nodes on intravenous administration, and can thus
CC be used to facilitate identification of the lymph nodes (by fluorescence)
CC during surgery. The conjugate is selectively enriched in diseased tissue
CC and after excitation with light of a suitable wavelength provides long-
CC lasting fluorescence (specifically having a life in the millisecond
CC range) in the 480-600 nm wavelength region (in which the human eye is
CC most sensitive), the life of the fluorescence of the conjugate exceeding
CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
CC surface tumours is thus facilitated. The conjugates can be applied
CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
CC conjugates described in the disclosure of the invention.
XX SQ Sequence 28 AA;
Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HTDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 6
ADH68784
ID ADH68784 standard; peptide; 28 AA.
XX AC ADH68784;
XX DT 25-MAR-2004 (first entry)
XX DE Synthetic VIP analogue #91.
XX KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;

KW bladder; cervix.
XX OS Synthetic.
XX PN EP1170021-A2.
XX PD 09-JAN-2002.
XX PF 14-MAY-2001; 2001EP-00250164.
XX PR 15-MAY-2000; 2000US-00571407.
XX PA (SCHD) SCHERING AG.
XX PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX DR WPI; 2002-099222/14.
XX CC New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX PS Claim 21; SEQ ID NO 94; 97pp; German.
XX CC This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptides with
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumors, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumors, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
CC cervix. The claims also cover (i) a method of endoscopic in-vivo
CC fluorescence diagnosis, involving applying the conjugates topically by
CC spraying in the gastrointestinal tract, oesophagus or bladder or by
CC inhalation to the bronchi, optionally removing non-bonded excess
CC conjugates by washing and carrying out the endoscopic investigation by
CC local excitation at a wavelength of 250-450 nm and local detection of the
CC specific fluorescent radiation emitted by the conjugates and (ii) an
CC optical diagnostic composition for in vivo diagnosis of diseased tissue
CC regions, comprising at least one compound conjugated together with
CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
CC enriched in the lymph nodes on intravenous administration, and can thus
CC be used to facilitate identification of the lymph nodes (by fluorescence)
CC during surgery. The conjugate is selectively enriched in diseased tissue
CC and after excitation with light of a suitable wavelength provides long-
CC lasting fluorescence (specifically having a life in the millisecond
CC range) in the 480-600 nm wavelength region (in which the human eye is
CC most sensitive), the life of the fluorescence of the conjugate exceeding
CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
CC surface tumours is thus facilitated. The conjugates can be applied
CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
CC conjugates described in the disclosure of the invention.
XX SQ Sequence 28 AA;
Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HLDVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 7
ADH68782
ID ADH68782 standard; peptide; 28 AA.
XX AC ADH68782;

XX 25-MAR-2004 (first entry)
XX Synthetic VIP analogue #89.
XX conjugate; vasoactive intestinal peptide, VIP; somatostatin; neurotensin;
KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
KW bladder; cervix.
XX Synthetic.
XX EP1170021-A2.
XX 09-JAN-2002.
XX 14-MAY-2001; 2001EP-00250164.
XX 15-MAY-2000; 2000US-00571407.
XX (SCHD) SCHERING AG.
XX Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX WPI; 2002-099222/14.
XX New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX Claim 21; SEQ ID NO 92; 97pp; German.
XX This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptide complexes.
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
CC cervix. The claims also cover (i) a method of endoscopic in-vivo
CC fluorescence diagnosis, involving applying the conjugates topically by
CC spraying in the gastrointestinal tract, oesophagus or bladder or by
CC inhalation to the bronchi, optionally removing non-bonded excess
CC conjugates by washing and carrying out the endoscopic investigation by
CC local excitation at a wavelength of 250-450 nm and local detection of the
CC specific fluorescent radiation emitted by the conjugates and (ii) an
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CC regions, comprising at least one compound conjugated together with
CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
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CC be used to facilitate identification of the lymph nodes (by fluorescence)
CC during surgery. The conjugate is selectively enriched in diseased tissue
CC and after excitation with light of a suitable wavelength provides long-
CC lasting fluorescence (specifically having a life in the millisecond
CC range) in the 480-600 nm wavelength region (in which the human eye is
CC most sensitive), the life of the fluorescence of the conjugate exceeding
CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
CC surface tumours is thus facilitated. The conjugates can be applied
CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
CC conjugates described in the disclosure of the invention.
XX Sequence 28 AA;
SQ Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HWDVFTDNYTLRKQMAVKYKYLNSILN 28
DB 1 HWDVFTDNYTLRKQMAVKYKYLNSILN 28

RESULT 8
ADH68786
ID ADH68786 standard; peptide; 28 AA.
XX
AC ADH68786;
XX
DT 25-MAR-2004 (first entry)
XX
XX Synthetic VIP analogue #93.
XX conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
KW bladder; cervix.
XX
OS Synthetic.
XX
XX EP1170021-A2.
XX
XX 09-JAN-2002.
XX
XX 14-MAY-2001; 2001EP-00250164.
XX
XX 15-MAY-2000; 2000US-00571407.
XX
XX (SCHD) SCHERING AG.
XX
XX Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX WPI; 2002-099222/14.
XX
XX New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX
XX Claim 21; SEQ ID NO 96; 97pp; German.
XX This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptides with
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
CC cervix. The claims also cover (i) a method of endoscopic in-vivo
CC fluorescence diagnosis, involving applying the conjugates topically by
CC spraying in the gastrointestinal tract, oesophagus or bladder or by
CC inhalation to the bronchi, optionally removing non-bonded excess
CC conjugates by washing and carrying out the endoscopic investigation by
CC local excitation at a wavelength of 250-450 nm and local detection of the
CC specific fluorescent radiation emitted by the conjugates and (ii) an
CC optical diagnostic composition for in vivo diagnosis of diseased tissue
CC regions, comprising at least one compound conjugated together with
CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
CC enriched in the lymph nodes on intravenous administration, and can thus
CC be used to facilitate identification of the lymph nodes (by fluorescence)
CC during surgery. The conjugate is selectively enriched in diseased tissue
CC and after excitation with light of a suitable wavelength provides long-
CC lasting fluorescence (specifically having a life in the millisecond
CC range) in the 480-600 nm wavelength region (in which the human eye is
CC most sensitive), the life of the fluorescence of the conjugate exceeding
CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
CC surface tumours is thus facilitated. The conjugates can be applied
CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
CC conjugates described in the disclosure of the invention.
XX Sequence 28 AA;
SQ

Query Match 91.3%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HQDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
AAP10172
ID AAP10172 standard; peptide; 28 AA.
XX
AC AAP10172;
XX
XX 25-MAR-2003 (revised)
DT 21-DEC-1992 (first entry)
XX
DE VIP.
XX Vasoactive intestinal polypeptide;
KW allergic asthma. chemical mediator isolation-inhibiting action.
XX Homo sapiens.
XX
XX JP56128721-A.
XX
XX 08-OCT-1981.
XX
XX 12-MAR-1980; 80JP-00030308.
XX
XX 12-MAR-1980; 80JP-00030308.
XX
XX (BISA) EISAI CO LTD.
XX
XX WPI; 1981-86052D/47.
XX
XX Antiallergic agent comprises peptide - contg. 28 amino acid unite, is
PT active against e.g. bronchial asthma and hay fever.
XX
XX Claim 1; Page 1; 3pp; Japanese.
XX
XX The sequence given can be used as the active component in an antiallergic
CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
CC isolation-inhibiting action and is effective for therapy and prevention
CC of various allergic diseases, such as allergic rhinitis, bronchial
CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
CC etc. Since it also has specific bronchial smooth muscle relaxant action,
CC it is esp. useful for treating and preventing bronchial and allergic
CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
CC 2003 to correct PA field.)
XX
XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
AAP71039
ID AAP71039 standard; peptide; 28 AA.
XX
XX AAP71039;
XX
XX 03-OCT-2002 (revised)
DT 05-APR-1991 (first entry)
XX
XX Sequence of active ingredient in hair growth promoting compen.

Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
hair growth promoter.
XX
XX Synthetic.
XX
XX EP225639-A.
XX
XX 16-JUN-1987.
XX
XX 10-DEC-1986; 86EP-00117190.
XX
XX 10-DEC-1985; 85JP-00276099.
XX
XX (MEIJ) MEIJI SEIKA KAISHA.
XX
XX Yanaihara N, Matanabe S, Kasai M, Sato T, Kikkoji T;
XX WPI; 1987-164873/24.
XX
XX Hair growth promoting compsns. - contg. vasoactive intestinal polypeptide
PT and carrier.
XX
XX Claim 1; Page 8; 10pp; English.
XX
XX When applied to the skin, the peptide causes a local increase in blood
CC flow and promotes hair growth. It is the natural peptide known as
CC vasoactive intestinal polypeptide which has been isolated from the
CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
XX
XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX
XX AAR34943;
XX
XX 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX
XX Porcine VIP.
XX
XX Vasoactive intestinal peptide; asthma; bronchodilation activity;
KW bronchiotracheal constrictive disorders.
XX
XX Sus scrofa.
XX
XX EP536741-A2.
XX
XX 14-APR-1993.
XX
XX 08-OCT-1992; 92EP-00117185.
XX
XX 11-OCT-1991; 91US-00773747.
XX
XX (HOFF) HOFFMANN LA ROCHE & CO AG F.
XX
XX Bolin DR, Odonnell M;
XX
XX WPI; 1993-118996/15.
XX
XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchotracheal constructive disorders e.g. asthma.

XX Disclosure; Page 65; 141pp; English.

XX The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)

XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 12
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 AC AAR40272;
 XX
 DT 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 XX
 DE Native VIP.
 XX Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 KW side effect; bronchoconstrictive disorder; asthma.
 KW
 XX
 OS Sus scrofa.
 XX
 FH Key Location/Qualifiers
 FT Modified-site 28 /note= "C-terminal is amidated"
 FT
 PN US2334907-A.
 XX
 PD 10-AUG-1993.
 XX
 PF 24-APR-1991; 91US-00690300.
 XX
 PR 30-JUN-1989; 89US-00374503.
 XX
 PA (HOFF) HOFFMANN LA ROCHE INC.
 XX
 PI Bolin DR;
 XX
 DR WPI; 1993-264645/33.
 XX
 PT New vasoactive intestinal peptide analogues - are potent bronchodilators
 PT without cardiovascular side effects, used for treating, e.g. asthma.
 XX
 PS Disclosure; Page 25-26; 66pp; English.
 CC VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
 CC formulae; AAR40279-364: examples). The VIP analogues are potent
 CC bronchodilators and have no cardiovascular side effects. They are used
 CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
 CC on 25-MAR-2003 to correct PF field.)

XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
 AAR53111
 ID AAR53111 standard; peptide; 28 AA.
 AC AAR53111;
 XX
 DT 20-DEC-1994 (first entry)
 DE Bronchodilator peptide #21.
 KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 10 /note= "D-form residue"
 FT Misc-difference 22 /note= "D-form residue"
 FT Modified-site 28 /note= "D-form residue"
 FT /note= "Amidated C-terminal"
 XX
 PN JP06092991-A.
 XX
 PD 05-APR-1994.
 XX
 PF 28-FEB-1991; 91JP-00034335.
 XX
 PR 28-FEB-1991; 91JP-00034335.
 XX
 PA (DAIL) DAICEL CHEM IND LTD.
 PA (MEIJ) MEIJI SEIKA KAISHA.
 XX
 DR WPI; 1994-147946/18.
 XX
 PT Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.
 XX
 PS Disclosure; Page 5; 29pp; Japanese.
 XX
 CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
 AAR53109
 ID AAR53109 standard; peptide; 28 AA.
 AC AAR53109;
 XX
 DT 20-DEC-1994 (first entry)

```

XX DE Bronchodilator peptide #19.
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX KW selectivity; toxicity; mammal; bronchodilator.
XX OS Synthetic.
XX FH Key Location/Qualifiers
FT Misc-difference 10
FT /note= "D-form residue"
FT Modified-site 28
FT /note= "Amidated C-terminal"
XX PN JP06092991-A.
XX PD 05-APR-1994.
XX PF 28-FEB-1991; 91JJP-00034335.
XX PR 28-FEB-1991; 91JJP-00034335.
XX PA (DAIL ) DAICEL CHEM IND LTD.
XX PA (MEIJ ) MEIJI SEIKA KAISHA.
XX DR WPI; 1994-147946/18.
XX PT Active peptide(s), having smooth muscle relaxing activity - useful as
XX PT bronchodilators.
XX PS Disclosure; Page 5; 29pp; Japanese.
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX CC the smooth muscle selectively and are only low toxic-non- toxic to
XX CC mammals. These peptides may be used as bronchodilators. They are prepared
XX CC by solid phase synthesis using a resin having an amino functional group
XX CC capable of bonding to the amino acid at the carboxy terminal through a
XX CC carboxyl group and fixing the peptide chain during the synthesis
XX SQ Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
AAR53110
ID AAR53110 standard; peptide; 28 AA.
XX AC AAR53110;
XX DT 20-DEC-1994 (first entry)
XX DE Bronchodilator peptide #20.
XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX KW selectivity; toxicity; mammal; bronchodilator.
XX OS Synthetic.
XX FH Key Location/Qualifiers
FT Misc-difference 22
FT /note= "D-form residue"
FT Modified-site 28
FT /note= "Amidated C-terminal"
XX PN JP06092991-A.

```

```

XX 05-APR-1994.
XX 28-FEB-1991; 91JJP-00034335.
XX 28-FEB-1991; 91JJP-00034335.
XX (DAIL ) DAICEL CHEM IND LTD.
XX (MEIJ ) MEIJI SEIKA KAISHA.
XX WPI; 1994-147946/18.
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX PT bronchodilators.
XX PS Disclosure; Page 5; 29pp; Japanese.
XX CC The sequences given in AAR53091-111 are synthetic peptides based on
XX CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX CC the smooth muscle selectively and are only low toxic-non- toxic to
XX CC mammals. These peptides may be used as bronchodilators. They are prepared
XX CC by solid phase synthesis using a resin having an amino functional group
XX CC capable of bonding to the amino acid at the carboxy terminal through a
XX CC carboxyl group and fixing the peptide chain during the synthesis
XX SQ Sequence 28 AA;

Query Match 90.7%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:19
Job time : 78.875 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVFTDNYTLRLKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA.*
1: /cgn2_6/ptodata/1/aaa/5 COMB.pdp.*
2: /cgn2_6/ptodata/1/aaa/6 COMB.pdp.*
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6: /cgn2_6/ptodata/1/aaa/backfiles1.pdp.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	150	100.0	28	US-09-528-200-1	Sequence 1, Appli
2	150	100.0	28	US-09-528-200-64	Sequence 64, Appl
3	141	94.0	28	US-09-528-200-65	Sequence 65, Appl
4	140	93.3	28	US-09-528-200-56	Sequence 56, Appl
5	138	92.0	28	US-09-528-200-60	Sequence 60, Appl
6	137	91.3	28	US-09-528-200-57	Sequence 57, Appl
7	137	91.3	28	US-09-528-200-59	Sequence 59, Appl
8	137	91.3	28	US-09-528-200-61	Sequence 61, Appl
9	137	91.3	28	US-09-528-200-62	Sequence 62, Appl
10	136	90.7	28	US-07-690-300B-1	Sequence 1, Appli
11	136	90.7	28	US-07-676-987A-1	Sequence 1, Appli
12	136	90.7	28	US-07-868-906-1	Sequence 1, Appli
13	136	90.7	28	US-08-201-092-1	Sequence 1, Appli
14	136	90.7	28	US-07-924-054-11	Sequence 11, Appl
15	136	90.7	28	US-08-243-082-1	Sequence 1, Appli
16	136	90.7	28	US-08-361-443-1	Sequence 1, Appli
17	136	90.7	28	US-08-288-681A-1	Sequence 1, Appli
18	136	90.7	28	US-07-776-272-26	Sequence 26, Appl
19	136	90.7	28	US-08-308-729-1	Sequence 1, Appli
20	136	90.7	28	US-08-062-472B-40	Sequence 40, Appl
21	136	90.7	28	US-08-171-701A-1	Sequence 1, Appli
22	136	90.7	28	US-08-741-678-1	Sequence 1, Appli
23	136	90.7	28	US-08-519-180-2	Sequence 2, Appli
24	136	90.7	28	US-08-414-424-1	Sequence 1, Appli
25	136	90.7	28	US-08-413-708B-1	Sequence 1, Appli
26	136	90.7	28	US-08-818-253-37	Sequence 37, Appl
27	136	90.7	28	US-08-897-624-1	Sequence 1, Appli

28	136	90.7	28	2	US-08-930-845-1	Sequence 1, Appli
29	136	90.7	28	2	US-08-952-568-3	Sequence 3, Appli
30	136	90.7	28	2	US-08-952-568-4	Sequence 4, Appli
31	136	90.7	28	2	US-08-952-568-5	Sequence 5, Appli
32	136	90.7	28	2	US-08-952-568-6	Sequence 6, Appli
33	136	90.7	28	2	US-08-952-568-10	Sequence 10, Appl
34	136	90.7	28	2	US-08-952-568-11	Sequence 11, Appl
35	136	90.7	28	2	US-08-952-568-12	Sequence 12, Appl
36	136	90.7	28	2	US-08-952-568-13	Sequence 13, Appl
37	136	90.7	28	2	US-09-192-048-21	Sequence 21, Appl
38	136	90.7	28	2	US-08-893-749-2	Sequence 2, Appli
39	136	90.7	28	2	US-08-818-252-37	Sequence 37, Appl
40	136	90.7	28	2	US-09-260-846-16	Sequence 16, Appl
41	136	90.7	28	2	US-08-842-322-31	Sequence 31, Appl
42	136	90.7	28	2	US-09-333-842-1	Sequence 1, Appli
43	136	90.7	28	2	US-09-446-352B-1	Sequence 1, Appli
44	136	90.7	28	2	US-09-316-919-53	Sequence 53, Appl
45	136	90.7	28	2	US-09-630-335-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-1
; Sequence 1, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE OF INVENTION: FOR OPTICAL DIAGNOSIS
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-1

Query Match 100.0%; Score 150; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 HWDVFTDNYTLRLKQMAVKYLSILN 28
Db 1 HWDVFTDNYTLRLKQMAVKYLSILN 28

RESULT 2
US-09-528-200-64
; Sequence 64, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 64
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-64

Query Match 100.0%; Score 150; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 1.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
|:|||||||||||||||||||||||||
Db 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-65
; Sequence 65, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 65
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-65

Query Match 94.0%; Score 141; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
|:|||||||||||||||||||||||||
Db 1 HYDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4
US-09-528-200-56
; Sequence 56, Application US/09528200

; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 56
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-56

Query Match 93.3%; Score 140; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
|:|||||||||||||||||||||||||
Db 1 HFDVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5
US-09-528-200-60
; Sequence 60, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 60
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-60

Query Match 92.0%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28

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Db      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
RESULT 6
US-09-528-200-57
; Sequence 57, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICH, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 57
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-57
Query Match      91.3%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
RESULT 7
US-09-528-200-59
; Sequence 59, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICH, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 59
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-59
Query Match      91.3%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
RESULT 8
US-09-528-200-61
; Sequence 61, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICH, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 61
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-61
Query Match      91.3%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
RESULT 9
US-09-528-200-62
; Sequence 62, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICH, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 62
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-62
Query Match      91.3%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db      1  HMDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
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1 SEQ ID NO 62
1 LENGTH: 28
1 TYPE: PRT
1 ORGANISM: Artificial Sequence
1 FEATURES:
1 OTHER INFORMATION: Description of Artificial Sequence: Synthetic
1 ; OTHER INFORMATION: peptide
US-09-528-200-62

Query Match 91.3%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HTDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12;
Matches 27; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004

; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/676,987A
; FILING DATE: 19910329
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: REPPER, GEORGE R.
; REGISTRATION NUMBER: 31,414
; REFERENCE/DOCKET NUMBER: 1783-101
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 783-6040
; TELEFAX: (202) 783-6031
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kurono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki
; TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk

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; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
;
; US-08-201-092-1
;
; Query Match 90.7%; Score 136; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 1.4e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels
;
; QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
; | | | | | | | | | | | | | | | | | | | |
; DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; RESULT 14
; US-07-924-054-11
; Sequence 11, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; ADDRESSEE: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 523-3400
; TELEFAX: (617) 523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
;
; US-07-924-054-11
;
; Query Match 90.7%; Score 136; DB 1; Length 28;

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Best Local Similarity 96.4%; Pred. No. 1.4e-12; DB 1; Length 28;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKYKYLNSILN 28

RESULT 15

US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/243,082
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/853,754
; FILING DATE: 05-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Schneller, John W.
; REGISTRATION NUMBER: 26,031
; REFERENCE/DOCKET NUMBER: KUWAT 0010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 828-8000
; TELEFAX: (202) 828-8038
; TELEX: SPENCER 64267
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12; DB 1; Length 28;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKYKYLNSILN 28

Search completed: January 25, 2006, 15:23:43
Job time : 22.875 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HWDVFTDNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications_AA_Main:*

1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*

2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*

3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*

4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*

5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*

6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	136	90.7	28	US-09-929-818-1	Sequence 1, Appli
2	136	90.7	28	US-09-999-745-53	Sequence 53, Appl
3	136	90.7	28	US-09-554-000-37	Sequence 37, Appl
4	136	90.7	28	US-10-090-109A-1	Sequence 1, Appli
5	136	90.7	28	US-10-044-722-8	Sequence 8, Appli
6	136	90.7	28	US-10-004-530A-17	Sequence 17, Appl
7	136	90.7	28	US-10-114-716A-3	Sequence 3, Appli
8	136	90.7	28	US-10-211-994-1	Sequence 1, Appli
9	136	90.7	28	US-10-197-954-145	Sequence 145, App
10	136	90.7	28	US-10-100-256B-1	Sequence 1, Appli
11	136	90.7	28	US-10-254-569A-1	Sequence 1, Appli
12	136	90.7	28	US-10-201-288-31	Sequence 31, Appl
13	136	90.7	28	US-10-343-654-22	Sequence 22, Appl
14	136	90.7	28	US-10-416-822-1	Sequence 1, Appli
15	136	90.7	28	US-10-467-059-14	Sequence 14, Appl
16	136	90.7	28	US-10-494-634-7	Sequence 7, Appli
17	136	90.7	28	US-10-718-071-36	Sequence 36, Appl
18	136	90.7	28	US-10-788-563-17	Sequence 17, Appl
19	136	90.7	28	US-10-760-085-145	Sequence 145, App
20	136	90.7	28	US-10-892-981A-1	Sequence 1, Appli
21	136	90.7	28	US-10-769-803-2	Sequence 2, Appli
22	136	90.7	28	US-10-919-325-32	Sequence 32, Appl
23	136	90.7	28	US-10-898-143-1	Sequence 1, Appli
24	136	90.7	28	US-10-930-548-3	Sequence 3, Appli
25	136	90.7	28	US-10-770-712-56	Sequence 56, Appl
26	136	90.7	28	US-10-799-897A-1	Sequence 1, Appli
27	136	90.7	28	US-11-066-697-454	Sequence 454, App

28	136	90.7	28	6	US-11-066-697-455	Sequence 455, App
29	136	90.7	29	4	US-10-131-543-11	Sequence 11, Appl
30	136	90.7	29	4	US-10-131-546-11	Sequence 11, Appl
31	136	90.7	29	4	US-10-131-346-11	Sequence 11, Appl
32	136	90.7	29	4	US-10-415-024-11	Sequence 11, Appl
33	136	90.7	29	6	US-11-088-596-11	Sequence 11, Appl
34	136	90.7	29	6	US-11-086-966-11	Sequence 11, Appl
35	136	90.7	30	3	US-09-929-818-203	Sequence 203, App
36	136	90.7	30	3	US-09-929-818-204	Sequence 204, App
37	136	90.7	30	3	US-09-929-818-205	Sequence 205, App
38	136	90.7	31	4	US-10-131-543-9	Sequence 9, Appli
39	136	90.7	31	4	US-10-131-543-10	Sequence 10, Appl
40	136	90.7	31	4	US-10-131-543-16	Sequence 16, Appl
41	136	90.7	31	4	US-10-131-546-9	Sequence 9, Appli
42	136	90.7	31	4	US-10-131-546-10	Sequence 10, Appl
43	136	90.7	31	4	US-10-131-546-16	Sequence 16, Appl
44	136	90.7	31	4	US-10-131-346-9	Sequence 9, Appli
45	136	90.7	31	4	US-10-131-346-10	Sequence 10, Appl

ALIGNMENTS

RESULT 1

US-09-929-818-1

; Sequence 1, Application US/09929818

; Patent No. US20020099003A1

; GENERAL INFORMATION:

; APPLICANT: WILSON, LELAND F.

; APPLICANT: PLACE, VIRGIL A.

; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

; TITLE OF INVENTION: AND AGONISTS THEREOF

; FILE REFERENCE: 9050-0013.24

; CURRENT APPLICATION NUMBER: US/09/929,818

; CURRENT FILING DATE: 2001-08-13

; PRIOR APPLICATION NUMBER: 09/498,522

; PRIOR FILING DATE: 2000-02-04

; PRIOR APPLICATION NUMBER: 09/181,316

; PRIOR FILING DATE: 1998-10-27

; PRIOR APPLICATION NUMBER: 08/959,064

; PRIOR FILING DATE: 1997-10-28

; PRIOR APPLICATION NUMBER: 08/959,057

; PRIOR FILING DATE: 1997-10-28

; NUMBER OF SEQ ID NOS: 207

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 1

; LENGTH: 28

; TYPE: PRT

; ORGANISM: Homo sapiens

US-09-929-818-1

Query Match 90.7%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28

DB 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

RESULT 2

US-09-999-745-53

; Sequence 53, Application US/09999745

; Patent No. US20020157120A1

; GENERAL INFORMATION:

; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

; APPLICANT: Tsien, Roger Y.

; APPLICANT: Baird, Geoffrey

; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS

; FILE REFERENCE: REGEN1470-1

; CURRENT APPLICATION NUMBER: US/09/999,745

; CURRENT FILING DATE: 2001-10-23


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; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; TITLE OF INVENTION: Analogs and Methods of Use Thereof
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

Query Match          90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1
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Query Match 90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-10-201-288-31
; Sequence 31, Application US/10201288
; Publication No. US20030203373A1
; GENERAL INFORMATION:
; APPLICANT: SCHLEUNING, Wolf-Dieter
; APPLICANT: SCHULZ, Torsten
; TITLE OF INVENTION: METHOD FOR IDENTIFYING A PHARMACOLOGICALLY ACTIVE SUBSTANCE
; FILE REFERENCE: Q71278
; CURRENT APPLICATION NUMBER: US/10/201,288
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: DE 102 08 178.5
; PRIOR FILING DATE: 2002-02-20
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Human
US-10-201-288-31

Query Match 90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 13
US-10-343-654-22
; Sequence 22, Application US/10343654
; Publication No. US20030204063A1
; GENERAL INFORMATION:
; APPLICANT: Denis Gravel (Inventor)
; APPLICANT: Abdelkrim Habi (Inventor)
; APPLICANT: Thierry Abribat (Inventor)
; APPLICANT: Theratechnologies Inc. (Assignee)
; TITLE OF INVENTION: Modified Biological Peptides with
; TITLE OF INVENTION: Increased Potency
; FILE REFERENCE: 12411-22PCT
; CURRENT APPLICATION NUMBER: US/10/343,654
; CURRENT FILING DATE: 2003-02-03
; NUMBER OF SEQ ID NOS: 50
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
; LENGTH: 28
; TYPE: PRT
; ORGANISM: human
; FEATURE:
; NAME/KEY: AMIDATION
; LOCATION: (28)...(28)
US-10-343-654-22

Query Match 90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
US-10-416-822-1
; Sequence 1, Application US/10416822
; Publication No. US20040063631A1
; GENERAL INFORMATION:
; APPLICANT: Mondobiotech SA
; TITLE OF INVENTION: Use of biologically active peptides for the treatment of pulmonary
; TITLE OF INVENTION: arteriolar hypertension and related diseases
; FILE REFERENCE: PMB-0203 US
; CURRENT APPLICATION NUMBER: US/10/416,822
; CURRENT FILING DATE: 2003-05-13
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-416-822-1

Query Match 90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
US-10-467-059-14
; Sequence 14, Application US/10467059
; Publication No. US20040132648A1
; GENERAL INFORMATION:
; APPLICANT: ONOUE, SATOMI
; APPLICANT: KASHIMOTO, KAZUHIISA
; TITLE OF INVENTION: THERAPEUTIC AND/OR PROPHYLACTIC AGENT AGAINST CONFORMATIONAL DISEASE

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; FILE REFERENCE: 241706USOPECT
; CURRENT APPLICATION NUMBER: US/10/467,059
; CURRENT FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: PCT/JP02/13311
; PRIOR FILING DATE: 2002-12-19
; PRIOR APPLICATION NUMBER: JP 2001-386699
; PRIOR FILING DATE: 2001-12-19
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-467-059-14

Query Match      90.7%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

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Search completed: January 25, 2006, 15:31:03
Job time : 54.625 secs

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Result No.	Score	Query		DB	ID	Description
		Match	Length			
1	136	90.7	28	7	US-11-175-690-352	Sequence 352, App
2	136	90.7	28	7	US-11-175-690-353	Sequence 353, App
3	136	90.7	637	7	US-11-175-690-265	Sequence 265, App
4	136	90.7	637	7	US-11-175-690-266	Sequence 266, App
5	100	66.7	636	7	US-11-175-690-240	Sequence 240, App
6	99	66.0	27	7	US-11-175-690-326	Sequence 326, App
7	99	66.0	27	7	US-11-175-690-327	Sequence 327, App
8	99	66.0	38	7	US-11-175-690-328	Sequence 328, App
9	99	66.0	38	7	US-11-175-690-329	Sequence 329, App
10	99	66.0	636	7	US-11-175-690-239	Sequence 239, App
11	99	66.0	647	7	US-11-175-690-241	Sequence 241, App
12	99	66.0	647	7	US-11-175-690-242	Sequence 242, App
13	71	47.3	636	7	US-11-175-690-278	Sequence 278, App
14	70	46.7	27	7	US-11-175-690-364	Sequence 364, App
15	70	46.7	27	7	US-11-175-690-365	Sequence 365, App
16	70	46.7	636	7	US-11-175-690-277	Sequence 277, App
17	62	41.3	30	7	US-11-112-277-30	Sequence 30, Appli
18	58	38.7	30	7	US-11-112-277-2	Sequence 2, Appli
19	56	37.3	30	7	US-11-112-277-29	Sequence 29, Appl
20	56	37.3	30	7	US-11-112-277-31	Sequence 31, Appl
21	56	37.3	49	6	US-10-997-081A-26	Sequence 26, Appl
22	56	37.3	49	6	US-10-997-081A-27	Sequence 27, Appl
23	56	37.3	49	6	US-10-997-081A-28	Sequence 28, Appl
24	56	37.3	49	6	US-10-997-081A-29	Sequence 29, Appl
25	56	37.3	49	6	US-10-997-081A-30	Sequence 30, Appl

[illegible]

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; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 242
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-242
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Query Match 66.0%; Score 99; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 2.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;
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QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
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| | | | | : | | | | | | | | | | : |
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 51
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```
RESULT 13
US-11-175-690-278
; Sequence 278, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 278
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-278
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Query Match 47.3%; Score 71; DB 7; Length 636;
Best Local Similarity 42.9%; Pred. No. 0.0033;
Matches 12; Conservative 9; Mismatches 7; Indels 0; Gaps 0;
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QY 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
| | | | | : | | | | | | | | | | : |
| | | | | : | | | | | | | | | | : |
Db 25 HADGVFTSDFSKLGLQLSAKKYLESLMD 52
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```
RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364
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Query Match 46.7%; Score 70; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.00014;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;
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QY 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
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Db 1 HADGVFTSDFSKLGLQLSAKKYLESLM 27
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RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27
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us-10-626-719-1.rapbn

Wed Feb 8 17:49:00 2006

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365
Query Match      46.7%; Score 70; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.00014;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

QY      1 HWDVFTDNYTRLRKQMAVKYLSIL 27
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      | | | | | : : : | | | | : :
Db      1 HADGVFTSDFSKLLGQLSAKKYLESLM 27

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Job time : 4.5 secs
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Result No.	Score	Query Match			DB	ID	Description
		Length	Length	Score			
1	136	90.7	28	2	B60071	vasoactive intesti	
2	136	90.7	28	2	A60304	vasoactive intesti	
3	136	90.7	55	1	VRBO	vasoactive intesti	
4	136	90.7	55	1	VRBB	vasoactive intesti	
5	136	90.7	55	1	VRSH	vasoactive intesti	
6	136	90.7	58	1	VRPG	vasoactive intesti	
7	136	90.7	145	2	A60038	vasoactive intesti	
8	136	90.7	170	1	VRHU	vasoactive intesti	
9	136	90.7	170	1	VRRT	vasoactive intesti	
10	136	90.7	170	2	A60037	vasoactive intesti	
11	123	82.0	55	1	VRGP	vasoactive intesti	
12	121	80.7	185	1	VRCH	vasoactive intesti	
13	120	80.0	28	2	A60303	vasoactive intesti	
14	113	75.3	28	2	A38232	vasoactive intesti	
15	110	73.3	25	2	JQ0361	vasoactive intesti	
16	99	66.0	27	2	A61071	pituitary adenylat	
17	99	66.0	38	2	A61070	pituitary adenylat	
18	99	66.0	38	2	A49165	pituitary adenylat	
19	99	66.0	173	2	S34767	neuropeptides prec	
20	99	66.0	175	2	A37786	pituitary adenylat	
21	99	66.0	176	2	I84638	pituitary adenylat	
22	99	66.0	176	2	A34044	pituitary adenylat	
23	99	66.0	195	2	I50456	pituitary adenylat	
24	75	50.0	35	1	HWGHD	extendin-2 - Gila m	
25	72	48.0	38	1	HWGHS	extendin-1 - Mexica	
26	69	46.0	103	2	A41410	somatoliberin prec	
27	67	44.7	104	2	A32731	somatoliberin prec	
28	61	40.7	44	1	RHBOS	somatoliberin - bo	
29	56	37.3	27	1	SECH	secretin - chicken	

Db 1 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 28

RESULT 3

VRBO

vasoactive intestinal peptide precursor - bovine (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Bos primigenius taurus (cattle)

C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999

C;Accession: A61643; A61644; S09689

R;Carlquist, M.; Kaiser, R.; Tatamoto, K.; Joernvall, H.; Mutt, V.

Eur. J. Biochem. 144, 243-247, 1984

A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in

A;Reference number: A61643; MUID:85027215; PMID:6548446

A;Accession: A61643

A;Molecule type: protein

A;Residues: 1-27 <CAR>

A;Cross-references: UNIPARC:UPI0000173515

R;Carlquist, M.; Mutt, V.; Joernvall, H.

FEBS Lett. 108, 457-460, 1979

A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).

A;Reference number: A61644; MUID:80092152; PMID:520589

A;Accession: A61644

A;Molecule type: protein

A;Residues: 28-55 <CA2>

A;Cross-references: UNIPARC:UPI000002D1C0

R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, R.

Biochim. Biophys. Acta 1038, 355-359, 1990

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide

A;Reference number: S09688; MUID:90254163; PMID:2340294

A;Contents: annotation; comparison of mammalian PHI sequences

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 1; Mismatches 0; Gaps 0;

Matches 27; Conservative 0;

Db 1 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 28

28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

RESULT 4

VRBB

vasoactive intestinal peptide precursor - rabbit (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Oryctolagus cuniculus (domestic rabbit)

C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998

C;Accession: B60415; A60415

R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, P.

Peptides 11, 123-128, 1990

A;Title: Amino acid sequence of VIP. PHI and secretin from the rabbit small intestine.

A;Reference number: A60415; MUID:90259845; PMID:234298

A;Accession: B60415

A;Molecule type: protein

A;Residues: 1-27 <GOS>

A;Cross-references: UNIPARC:UPI00000351DB

A;Accession: A60415

A;Molecule type: protein

A;Residues: 28-55 <G02>

A;Cross-references: UNIPARC:UPI00000351DB

C;Superfamily: Glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 1; Mismatches 0; Gaps 0;

Matches 27; Conservative 0;

Qy 1 HWDVFTDNTYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

RESULT 5

VRSH

vasoactive intestinal peptide precursor - sheep (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004

C;Accession: B60072; A60072; G61063; A43974

R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.

Regul. Pept. 32, 169-179, 1991

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide 1

A;Reference number: A60072; MUID:91239834; PMID:2034821

A;Accession: B60072

A;Molecule type: protein

A;Residues: 1-27 <BOU>

A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515

A;Accession: A60072

A;Molecule type: protein

A;Residues: 28-55 <BO2>

A;Cross-references: UNIPARC:UPI000002D1C0

R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.

Regul. Pept. 38, 145-154, 1992

A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreacti

A;Reference number: A61063; MUID:92245116; PMID:1574609

A;Accession: C61063

A;Molecule type: protein

A;Residues: 28-55 <MIY>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Experimental source: hypothalamus, intestine

R;Gafvelin, G.

Peptides 11, 703-706, 1990

A;Title: Isolation and primary structure of VIP from sheep brain.

A;Reference number: A43974; MUID:91045331; PMID:2235680

A;Accession: A43974

A;Molecule type: protein

A;Residues: 28-55 <GAF>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Experimental source: brain

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;

F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 90.7%; Score 136; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 28-12; Indels 1; Mismatches 0; Gaps 0;

Matches 27; Conservative 0;

Qy 1 HWDVFTDNTYRLRKQMAVKYKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKYKYLNSILN 55

RESULT 6

VRPG

vasoactive intestinal peptide precursor - pig (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Sus scrofa domestica (domestic pig)

C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004

C;Accession: A01549; A60300; A01550; JTD0417; A56754; S09690

R;Tatamoto, K.; Mutt, V.

Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981

A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),

A;Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
A;Molecule type: protein
A;Residues: 1-27 <TAT>
A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R;Tatemoto, K.
Regul. Pept. 6, 330, 1983
A;Title: PHI - a new brain-gut peptide.
A;Reference number: A60300
A;Accession: A60300
A;Molecule type: protein
A;Residues: 1-27 <TA2>
A;Cross-references: UNIPARC:UPI00000351DB

R;Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974

A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A;Reference number: A01550; MUID:74167323; PMID:4829446
A;Accession: A01550
A;Molecule type: protein
A;Residues: 28-55 <MUT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Gaivelin, G.; Andersson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A;Title: Isolation and characterization of a variant form of vasoactive intestinal polypeptide
A;Reference number: J70417; MUID:88335763; PMID:2843830
A;Accession: J70417

A;Molecule type: protein

A;Residues: 28-58 <GAF>

A;Cross-references: UNIPARC:UPI000002B99A

A;Note: this extended form is active in a VIP assay but is probably an incompletely processed form

R;Bodanzky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974

A;Reference number: A26231; MUID:74308014; PMID:4854585

A;Contents: annotation

A;Note: a 28-residue peptide having the sequence and biological activities (in two assay systems)
R;Ichiki, Y.; Kitamura, K.; Kangawa, K.; Kawamoto, M.; Matsuo, H.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992

A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A;Reference number: A56754; MUID:93038640; PMID:1329741
A;Accession: A56754

A;Molecule type: protein

A;Residues: 1-24 <ICH>

A;Cross-references: UNIPARC:UPI0000173514

A;Experimental source: duodenum

A;Note: sequence extracted from NCBI backbone (NCBIP:114219)

R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, R.
Biochim. Biophys. Acta 1038, 355-359, 1990

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide hormone
A;Reference number: S09688; MUID:90254163; PMID:2340294

A;Contents: annotation

A;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin assay)

A;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; neuropeptide

F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following glycosylation)

Query Match 90.7%; Score 136; DB 1; Length 58;

Best Local Similarity 96.4%; Pred. No. 2.1e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28

|||||

DB 28 HSDAVFTDNYTRLRKQMAVKKYLNSILN 55

RESULT 7

A60038

vasoactive intestinal peptide precursor - crab-eating macaque (fragment)

C;Species: Macaca fascicularis (crab-eating macaque)

C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004

C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-145 <BEN>
A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil

Query Match 90.7%; Score 136; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 5.5e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28

|||||

DB 100 HSDAVFTDNYTRLRKQMAVKKYLNSILN 127

RESULT 8

VRHU

vasoactive intestinal peptide precursor [validated] - human

N;Alternate names: VIP precursor

N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va
C;Species: Homo sapiens (man)

C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004

C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; A01

R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985

A;Title: Structure of the human vasoactive intestinal polypeptide gene.

A;Reference number: A90952; MUID:86004065; PMID:3899557

A;Accession: A23296

A;Molecule type: DNA

A;Residues: 1-170 <TSU>

A;Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:g340243; PIDN:

A;Note: the authors translated the codon GAA for residue 48 as Gln

R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983

A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pepti

A;Reference number: A93313; MUID:83271523; PMID:6571696

A;Accession: A93313

A;Molecule type: mRNA

A;Residues: 1-170 <ITO>

A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA612

R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987

A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at

A;Reference number: A60205; MUID:87140054; PMID:2434617

A;Accession: A60205

A;Molecule type: mRNA

A;Residues: 78-155 <GOZ>

A;Cross-references: UNIPARC:UPI000016B2F8; GB:M1645; GB:M32162; NID:g340250; PIDN:AAA612

A;Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron

R;Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A;Reference number: A26361; MUID:87092456; PMID:3025882

A;Accession: A26361

A;Molecule type: DNA

A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:

A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1

R;Yangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987

A;Title: Isolation, characterization, and pharmacological actions of peptide histidine va

A;Reference number: A27419; MUID:88007645; PMID:3654650

A;Accession: A27419

A;Molecule type: protein

A;Residues: 81-122 <YIA>

A;Cross-references: UNIPARC:UPI00000351DE

R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodilator
F;1-27/Product: peptide histidine-isoleucine #status experimental <p27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 82.0%; Score 123; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 1.4e-10;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSIL 28
| | | | | : | | | | | : | | | | |
Db 28 HSDALFTDTYTLRKQMAVKKYLNSVLN 55

RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C/Species: Gallus gallus (chicken)
C/Date: 24-Apr-1994 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C/Accession: S47470; A91425; A90720; A01551
R/Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A/Description: Evidence for alternative splicing of the chicken VIP gene.
A/Reference number: S47470
A/Accession: S47470
A/Molecule type: mRNA
A/Residues: 1-165 <TAL>
A/Cross-references: UNIPROT:P48143; UNIPARC:UIP000002B6C3; EMBL:X80906; NID:g531364; PIDN:FEB5 Lett. 60, 322-326, 1975
A/Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A/Reference number: A91425; MUID:76210823; PMID:1227973
A/Accession: A91425
A/Molecule type: protein
A/Residues: 94-121 <NIL>
A/Cross-references: UNIPARC:UIP00000351E1
R/Bodanszky, M.; Lin, C.Y.; Viotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A/Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of the
A/Reference number: A90720
A/Contents: synthesis
A/Accession: A90720
A/Molecule type: protein
A/Residues: 107-121 <BOD>
A/Cross-references: UNIPARC:UIP0000173517
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gly)

Query Match 80.7%; Score 121; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 8.4e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSIL 27
| | | | | : | | | | | : | | | | |
Db 94 HSDAVFTDYSFRKQMAVKKYLNSVL 120

RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C/Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C/Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C/Accession: A60303; A60314; S07432
R/Dimaline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 16, 356, 1987
A/Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A/Reference number: A60303
A/Accession: A60303

A,Molecule type: protein
A,Residues: 1-28 <DIM>
A,Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A,Note: this reference is an abstract
R,Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A,Title: Isolation and partial sequence of elasmobranch VIP.
A,Reference number: A60314; MUID:86234323; PMID:3715063
A,Accession: A60314
A,Molecule type: protein
A,Residues: 1-10 <DI2>
A,Cross-references: UNIPARC:UPI000017662D
R,Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A,Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A,Reference number: S07432
A,Accession: S07432
A,Status: preliminary
A,Molecule type: protein
A,Residues: 1-28 <DI3>
A,Cross-references: UNIPARC:UPI000013884B
C,Superfamily: glucagon
C,Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 80.0%; Score 120; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 1.8e-10;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKVKNIL 27
Db 1 HSDVFTDNYSRIRKQMAVKVKNIL 27

```

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N/Alternate names: VIP
C/Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C/Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C/Accession: A38232
R:Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A/Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A/Reference number: A38232; MUID:92179271; PMID:1542675
A/Accession: A38232
A/Status: preliminary
A/Molecule type: protein
A/Residues: 1-28 <ENG>
A/Cross-references: UNIPROT:P3089; UNIPARC:UPI0000138846
A/Note: sequence extracted from NCBI backbone (NCBIP:87215)
C/Superfamily: glucagon
C/Keywords: duplication; intestine; neuropeptide

Query Match 75.3%; Score 113; DB 2; Length 28;
Best Local Similarity 76.6%; Pred. No. 1.8e-09;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDSYRLRLKQMAVKKYLNSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C/Species: Gadus morhua (Atlantic cod)
C/Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C/Accession: JQ0361
R:Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimoline, R.
Regul. Pept. 21, 436, 1988
A/Title: Isolation and characterisation of two teleost VIP's.
A/Reference number: JQ0361

```

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-1

Perfect score: 150

Sequence: 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	136	90.7	28	1 VIP CANFA	P63289 canis famil
2	136	90.7	28	1 VIP CAPHI	P63290 capra hircu
3	136	90.7	28	1 VIP MACMU	P84488 macaca mula
4	136	90.7	28	1 VIP SHEEP	P63291 ovis aries
5	136	90.7	72	1 VIP FIG	P01284 sus scrofa
6	136	90.7	72	1 VIP RABIT	P32649 oryctolagus
7	136	90.7	118	2 Q5TCY7 HUMAN	Q5TCY7 homo sapien
8	136	90.7	145	2 Q7M2Y9 MACFA	Q7M2Y9 macaca fasc
9	136	90.7	153	2 Q7TSR4 SMURI	Q7TSR4 arvicanthris
10	136	90.7	169	2 Q5TCY8 HUMAN	Q5TCY8 homo sapien
11	136	90.7	170	1 VIP BOVIN	P81401 bos taurus
12	136	90.7	170	1 VIP HUMAN	P01282 homo sapien
13	136	90.7	170	1 VIP MOUSE	P32648 mus musculus
14	136	90.7	170	1 VIP RAT	P01283 rattus norv
15	136	90.7	170	2 Q5TCY9 HUMAN	Q5TCY9 homo sapien
16	136	90.7	171	2 Q9D2Z7 MOUSE	Q9D2Z7 mus musculus
17	123	82.0	72	1 VIP CAURO	P04566 cavia porce
18	121	80.7	28	1 VIP ALLUMI	P48142 alligator m
19	121	80.7	28	1 VIP RANRI	P81016 rana ridibu
20	121	80.7	70	2 Q4TZX3 ANAPL	Q4TZX3 anas platyr
21	121	80.7	86	2 Q4TZY9 AVES	Q4TZY9 anser anser
22	121	80.7	200	1 VIP CHICK	P48143 gallus gall
23	121	80.7	200	1 VIP MELGA	P45644 meleagris g
24	121	80.7	202	2 Q7ZTGH XENLA	Q7ZTGH xenopus lae
25	120	80.0	28	1 VIP SCVCA	P09685 scylliorhinu
26	120	80.0	28	2 Q9PR19 AMICA	Q9PR19 amia calva
27	120	80.0	147	2 Q4SQN2 TETNG	Q4SQN2 tetraodon n
28	116	77.3	28	2 Q9PRN8 CARAU	Q9PRN8 carassius a
29	113	75.3	28	1 VIP DIDMA	P39089 didelphis m
30	110	73.3	25	1 VIP GADMO	P09684 gadus morhu
31	103	68.7	38	2 Q75W85 MIGN	Q75W85 misgurnus a

32	100	66.7	172	2 Q9DE29 BRARE	Q9DE29 brachydanio
33	100	66.7	199	2 Q5XJ29 BRARE	Q5XJ29 brachydanio
34	99	66.0	38	2 Q75W94 HALRO	Q75W94 halocynthia
35	99	66.0	38	2 Q8IU36 PERAM	Q8IU36 periplaneta
36	99	66.0	38	2 Q8IU37 SEPLE	Q8IU37 sepioteuthi
37	99	66.0	38	2 Q8IU38 HYDMA	Q8IU38 hydra magni
38	99	66.0	38	2 Q8IU39 DUGJA	Q8IU39 dugesia jap
39	99	66.0	38	2 Q75W87 ONCMY	Q75W87 oncorhynch
40	99	66.0	38	2 Q75W90 9TELE	Q75W90 sardinops m
41	99	66.0	38	2 Q75W92 9PERC	Q75W92 stephanolep
42	99	66.0	38	2 Q8AYP4 ACISC	Q8AYP4 acipenser s
43	99	66.0	38	2 Q8AYP5 TRAJP	Q8AYP5 trachurus j
44	99	66.0	62	2 Q53BI2 9PRIM	Q53BI2 gorilla gor
45	99	66.0	62	2 Q53BI3 PONPY	Q53BI3 pongo pygma

ALIGNMENTS

RESULT 1					
VIP CANFA					
ID	VIP CANFA	STANDARD;	PRT;	28 AA.	
AC	P63289; P04565;				
DT	13-AUG-1987 (Rel. 05, Created)				
DT	13-AUG-1987 (Rel. 05, Last sequence update)				
DT	13-SEP-2005 (Rel. 48, Last annotation update)				
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).				
DE	polypeptide).				
GN	Name=VIP;				
OS	Canis familiaris (Dog).				
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;				
OC	Canis.				
OX	NCBI_TaxID=9615;				
RN	[1]				
RP	PROTEIN SEQUENCE.				
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;				
RA	Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;				
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs".				
RL	Peptides 7 Suppl. 1:17-20(1986).				
CC	FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.				
CC	SUBCELLULAR LOCATION: Secreted.				
CC	SIMILARITY: Belongs to the glucagon family.				
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.				
CC	PIR; A60304; A60304.				
DR	HSSP; P18509; 1GEA.				
DR	ENSEMBL; ENSCAFG0000000538; Canis familiaris.				
DR	InterPro; IPR000532; Glucagon.				
DR	Pfam; PF00123; Hormone_2; 1.				
DR	PRINTS; PR00275; GLUCAGON.				
DR	SMART; SM00070; GLUCA; 1.				
DR	PROSITE; PS00260; GLUCAGON; 1.				
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.				
FT	MOD RES 28 Asparagine amide.				
SQ	SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;				

Query Match				90.7%;	Score 136;	DB 1;	Length 28;
Best Local Similarity				96.4%;	Pred. No. 5.9e-13;		
Matches				27;	Conservative	0;	Mismatches 1;
						Indels	0;
						Gaps	0;
Qy	1	HSDAVFTDNYTLRKQMAVKYLSILN	28				
Db	1	HSDAVFTDNYTLRKQMAVKYLSILN	28				

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RESULT 2
ID VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63290; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;
RT VIPs.;
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 90.7%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.9e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HMDAVFTDNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4
VIP_SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RA Gavellin G.;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RX TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Bounjoua Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucineamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RX TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Stibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

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MDLINE=74167323; PubMed=4829446;
Mutt V., Said S.I.;
"Structure of the porcine vasoactive intestinal octacosapeptide. The
amino-acid sequence. Use of kallikrein in its determination.";
Eur. J. Biochem. 42:581-589(1974).
[5]
SYNTHESIS OF VIP.
MDLINE=74308014; PubMed=4854585;
Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
"Synthesis of the vasoactive intestinal peptide (VIP).";
J. Am. Chem. Soc. 96:4973-4978(1974).
-1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
-1- FUNCTION: PHI also causes vasodilation.
-1- SUBCELLULAR LOCATION: Secreted.
-1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
with the human precursor sequence.
-1- SIMILARITY: Belongs to the glucagon family.
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the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
PIR; A01549; VRPG.
HSP; P18509; IGEA.
InterPro: IPR000532; Glucagon.
Pfam; PF00123; Hormone_2; 2.
PRINTS; PR00275; GLUCAGON.
PROSITE; PS00260; GLUCAGON; 2.
Annotation: Cleavage on pair of basic residues;
Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 27 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON_TER 1 1
FT NON_TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C1CA3A CRC64;
Query Match 90.7%; Score 136; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HWDVAVTDNYTRLRKQWAVKKYLSINL 28
Db 45 HSDAVFTDNYTRLRKQWAVKKYLSINL 72
RESULT 6
VIP_RABIT
ID_VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide
DE histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name:VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
ON NCBI_TaxID=9986;
RX [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

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"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine";
 RL Peptides 11:123-128 (1990).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SURCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC -----
 CC HSSP: P18509; 1GEA.
 DR InterPro: IPR000532; Glucagon.
 DR Pfam: PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 KW Amideation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD RES 27 27 Isoleucine amide.
 FT MOD RES 72 72 Asparagine amide.
 FT NON TER 1 1
 FT NON TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1A3A CRC64;
 Query Match 90.7%; Score 136; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 1.7e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HWDVFTDNTYRLRKQMAVKKYLNSILN 28
 DB 45 HSDAVFTDNTYRLRKQMAVKKYLNSILN 72
 RESULT 7
 Q5TCV7 HUMAN
 ID Q5TCV7 HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCV7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Name=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL133356; CA121766.1; -; Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON TER 1 1
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
 Query Match 90.7%; Score 136; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 2.9e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HWDVFTDNTYRLRKQMAVKKYLNSILN 28
 DB 74 HSDAVFTDNTYRLRKQMAVKKYLNSILN 101
 RESULT 8
 Q7M2Y9 MACFA
 ID Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 AC Q7M2Y9;
 DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal peptide precursor (Fragment).
 OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopitheidae; Cercopithecinae; Macaca.
 OX NCBI_TaxID=9541;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 RA Benson D.L.; Isaacson P.J.; Jones E.G.;
 RT "In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey and rat neocortex.";
 RL Brain Res. Mol. Brain Res. 9:169-174 (1991).
 DR PIR; A60038; A60038.
 DR HSSP; P18509; 1GEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON TER 1 1
 FT NON TER 145 145
 SQ SEQUENCE 145 AA; 16324 MW; IABESD98D853FESC CRC64;
 Query Match 90.7%; Score 136; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 3.6e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HWDVFTDNTYRLRKQMAVKKYLNSILN 28
 DB 100 HSDAVFTDNTYRLRKQMAVKKYLNSILN 127
 RESULT 9
 Q7TSR4 9MURI
 ID Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 AC Q7TSR4;
 DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal polypeptide (Fragment).
 OS Arvicanthia ansorgei.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; OC Muridae; Murinae; Arvicanthis.
 OX NCBI_TaxID=204747;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pavet P.;
 RA Masson-Pvet M.;
 RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY225375; AAP15167.1; -; mRNA.
 DR HSSP; P18509; 1GEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.

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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match          90.7%; Score 136; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 3.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 108 HSDAVFTDNYTLRKQMAVKKYLNSILN 135

RESULT 10
ID Q5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8
DT 01-FEB-2005 (TRENBLrel. 29, Created)
DT 01-FEB-2005 (TRENBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TRENBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

Query Match          90.7%; Score 136; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 124 HSDAVFTDNYTLRKQMAVKKYLNSILN 151

RESULT 11
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor (Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)).
GN Name=VIP;
OS Bos taurus (Bovine)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=20292342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27
RT synergistically regulates vasoactive intestinal polypeptide gene
RT transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duoenum;

RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from
RT bovine upper intestine. Relationships to other peptides of the
RT glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal
RT peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; AF503910; AAM28152.1; -; mRNA.
CC HSSP; P18509; IGEA.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 2.
CC PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match          90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 12
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor (Contains: intestinal peptide PHV-42;
DE intestinal peptide PHM-27 (Peptide histidine methioninamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)).
GN Name=VIP;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
CC Homo.
CC NCBI_TaxID=9606;
RN [1] NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571596;
RA Itoh N., Obata K.-I., Yanai H., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549(1983).
RN [2] NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanai H., Yanamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
RN [3] NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
RN [4] NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
RN [5] NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarter J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102(1985).
RN [6] NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
CC TISSUE=Prostate;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Srausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shennen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Uadin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Boek S.A., McEwen P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield A.S., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [7] NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fricklin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6(1986).
RN [8] NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancratic carcinoma;
RN [9] NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
RN [10] PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
RN [11] PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
RN [12] STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC EMBL: L00157; AAA61289.1; -; Genomic_DNA.
CC EMBL: L00154; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL: L00153; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL: L00156; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL: M33027; AAA69515.1; -; Genomic_DNA.
CC EMBL: M11553; AAA61284.1; -; Genomic_DNA.
CC EMBL: M11549; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL: M11550; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL: M11551; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL: M11552; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL: M14623; AAA61284.1; -; Genomic_DNA.
CC EMBL: M14619; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL: M14620; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL: M14621; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL: M14622; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL: M36610; AAA61286.1; -; Genomic_DNA.
CC EMBL: M36606; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL: M36607; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL: M36608; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL: M36609; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL: BC009794; AAA61287.1; -; mRNA.
CC EMBL: M36634; AAA61287.1; -; mRNA.


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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSP; P18509; 1GEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12893; VIP.
DR H-invDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHV-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT CONFLICT 96 97 QL -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19169 MW; 93EC0177F89508FD CRC64;

Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

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RT "High conservation of upstream regulatory sequences on the human and
RT mouse vasoactive intestinal peptide (VIP) genes.";
RL DNA Seq. 5:25-29(1994).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
CC PIR; A60037; A60037.
CC HSP; P18509; 1GEA.
CC Ensembl; ENSMUSG00000019772; Mus musculus.
CC MGI; MGI:98933; Vip.
CC GO; GO:0005615; C:extracellular space; TAS.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone_2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21 By similarity.
FT PROPEP 22 79
FT PEPTIDE 81 122 Intestinal peptide PHI-42 (By
FT PEPTIDE 81 107 similarity).
FT PEPTIDE 125 152 Intestinal peptide PHI-27.
FT PROPEP 156 170 Vasoactive intestinal peptide.
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT MOD_RES 152 152 group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT MOD_RES 133 133 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 170 AA; 19049 MW; 0164C831F85C73D CRC64;
SQ SEQUENCE 170 AA; 19049 MW; 0164C831F85C73D CRC64;

Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HWDVFTDNYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

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RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=383818; DOI=10.1016/0014-5793(85)80953-4;
RA Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
RT precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
RT basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycerolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; X02341; CA26200.1; -; mRNA.
DR FIR; A60053; VNR.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSRNOG00000018908; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL. 1 21
FT PROPEP 22 79 Intestinal peptide PHV-42 (By
FT PEPTIDE 81 122 similarity).
FT FT FT Intestinal peptide PHI-27.
FT PEPTIDE 81 107 Vasoactive intestinal peptide.
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68 N-linked (GlcNAc... ) (Potential).
FT CARBOHYD 133 133 N-linked (GlcNAc... ) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 90.7%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152
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RESULT 15
QSTCY9_HUMAN
ID QSTCY9_HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 90.7%; Score 136; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HWDVFTDNYTRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152

Search completed: January 25, 2006, 15:18:38
Job time : 76 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143

Sequence: 1 HSDAVFTNYTRLRKQMAVKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A_Geneseq_21.*

1: Geneseqp1980s.*

2: Geneseqp1990s.*

3: Geneseqp2000s.*

4: Geneseqp2001s.*

5: Geneseqp2002s.*

6: Geneseqp2003s.*

7: Geneseqp2003bs.*

8: Geneseqp2004s.*

9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	135	94.4	28	5	ABG94138 Human vas
2	135	94.4	28	5	ABG94139 Human vas
3	134	93.7	28	1	AAP10172 VIP. 3/20
4	134	93.7	28	1	AAP10139 Sequence
5	134	93.7	28	2	AAR34943 Porcine v
6	134	93.7	28	2	AAR40272 Native VI
7	134	93.7	28	2	AAR53111 Bronchodi
8	134	93.7	28	2	AAR53109 Bronchodi
9	134	93.7	28	2	AAR53110 Bronchodi
10	134	93.7	28	2	AAR87092 Vasoactiv
11	134	93.7	28	2	AAR83785 VIP. 2/19
12	134	93.7	28	2	AAR97810 Vasoactiv
13	134	93.7	28	2	AAR93023 Human glu
14	134	93.7	28	2	AAR65188 Vasoactiv
15	134	93.7	28	2	AAW06120 Human VIP
16	134	93.7	28	2	AAW06119 Mouse VIP
17	134	93.7	28	2	AAW06114 Rabbit VI
18	134	93.7	28	2	AAW06113 Macaque V
19	134	93.7	28	2	AAW06121 Pig VIP p
20	134	93.7	28	2	AAW06122 Goat VIP
21	134	93.7	28	2	AAW06115 Dog VIP p
22	134	93.7	28	2	AAW06112 Sheep VIP
23	134	93.7	28	2	AAW37791 Vasoactiv
24	134	93.7	28	2	AAW71677 Vasoactiv

RESULT 1

ID	ABG94138	standard; peptide; 28 AA.
XX	AC	ABG94138;
XX	DT	27-NOV-2002 (first entry)
XX	DE	Human vasoactive intestinal polypeptide (VIP) analogue #186.
XX	KW	Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva; vagina; vaginal atrophy; pain; intercourse; vaginal itching;
XX	KW	vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
XX	KW	sexual aversion; menopausal state; post-menopausal state; sexual desire;
XX	KW	sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
XX	KW	peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
XX	KW	vaginal muscle tone; vaginal lubrication; collagen misdeposition.
OS		Unidentified.
PN	US2002099003-A1.	
XX	PD	25-JUL-2002.
XX	PF	13-AUG-2001; 2001US-00929818.
XX	PR	28-OCT-1997; 97US-00959057.
XX	PR	28-OCT-1997; 97US-00959064.
XX	PR	27-OCT-1998; 98US-00181316.
XX	PA	04-FEB-2000; 2000US-00498522.
XX	PA	(WILSON) WILSON L F.
XX	PA	(PLAC) PLACE V A.
XX	PI	Wilson LF, Place VA;
XX	DR	WPI; 2002-697729/75.
XX	PT	Treating sexual dysfunction in females comprises administering vasoactive intestinal polypeptide or against to vagina and/or vulvar region.
XX	PS	Claim 19; Page; 19pp; English.
XX	CC	The invention relates to a method for treating sexual dysfunction in females comprising administering a formulation comprising a vasoactive agent comprising a vasoactive intestinal polypeptide and/or agonist to the vagina and/or vulvar region. The method is used for preventing

XX CC The invention relates to a method for treating sexual dysfunction in
CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

```

Query Match      93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 4
AAP71039
ID AAP71039 standard; peptide; 28 AA.
XX
AC AAP71039;
XX
DT 03-OCT-2002 (revised)
DT 05-APR-1991 (first entry)
XX
DE Sequence of active ingredient in hair growth promoting compsn.
XX
KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
KW hair growth promoter.
XX
OS Synthetic.
XX
PN EP225639-A.
XX
PD 16-JUN-1987.
XX
PF 10-DEC-1986; 86EP-00117190.
XX
PR 10-DEC-1985; 85JP-00276099.
XX
PA (MEIJ ) MEIJI SEIKA KAISHA.
XX
PI Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;
XX
DR WPI; 1987-164873/24.
XX
PT Hair growth promoting compsn. - contg. vasoactive intestinal polypeptide
PT and carrier.
XX
PS Claim 1; Page 8; 10pp; English.
XX
CC When applied to the skin, the peptide causes a local increase in blood
CC flow and promotes hair growth. It is the natural peptide known as
CC vasoactive intestinal polypeptide which has been isolated from the
CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
XX
SQ Sequence 28 AA;

Query Match      93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX
AC AAR34943;
XX
DT 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX
DE Porcine VIP.
XX
KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
KW bronchiotracheal constrictive disorders.

```

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XX Sus scrofa.
OS
XX
PN EP536741-A2.
XX
PD 14-APR-1993.
XX
PF 08-OCT-1992; 92EP-00117185.
XX
PR 11-OCT-1991; 91US-00773747.
XX
PA (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX
PI Bolin DR, Odonnell M;
XX
DR WPI; 1993-118996/15.
XX
PT New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchotracheal constructive disorders e.g. asthma.
XX
PS Disclosure; Page 65; 141pp; English.
XX
CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
CC claimed in EP-325044. The peptide sequence was used to design cyclic
CC analogues of VIP which have enhanced bronchodilation activity without any
CC observable side effects such as cardiovascular side effects. The
CC bronchodilation produced by the analogues can be sustained for more than
CC two hours. The analogues may be used for the treatment of bronchotracheal
CC constrictive disorders, e.g. asthma. See also RE3944-5016. (Updated on 25
CC -MAR-2003 to correct PN field.)
XX
SQ Sequence 28 AA;

Query Match      93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 6
AAR40272
ID AAR40272 standard; protein; 28 AA.
XX
AC AAR40272;
XX
DT 25-MAR-2003 (revised)
DT 09-FEB-1994 (first entry)
XX
DE Native VIP.
XX
KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
KW side effect; bronchoconstrictive disorder; asthma.
XX
OS Sus scrofa.
XX
FH Key Location/Qualifiers
FT Modified-site 28
FT /note= "C-terminal is amidated"
XX
PN US5234907-A.
XX
PD 10-AUG-1993.
XX
PF 24-APR-1991; 91US-00690300.
XX
PR 30-JUN-1989; 89US-00374503.
XX
PA (HOFF ) HOFFMANN LA ROCHE INC.
XX
PI Bolin DR;

```


XX 20-DEC-1993; 93JP-00319815.
XX (SANW) SANWA KAGAKU KENKYUSHO CO.
XX Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX WPI; 1995-247502/33.
XX New modified form of vasoactive intestinal polypeptide - with C-terminal
PT substd. amide residue, has greater in vivo stability and persistence,
PT useful for treating asthma and impotence.
XX Disclosure; Page 3; 16pp; English.
XX This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
CC a peptide hormone that shows smooth muscle relaxant activity. The
CC structure of VIP is similar to that of the other peptides in the glucagon
CC -secretin family, to which it belongs. VIP is present in the nervous
CC system and the digestive system tracts. It is also found in the lungs of
CC normal patients (however, it is not found in the lungs of people
CC suffering from bronchial asthma). The sequences shown in AAR83784 and
CC AAR83786 are analogues of this sequence. These analogues are found to be
CC resistant to protease digestion. The analogues can be used to treat
CC asthma (by inhalation) and impotence (percutaneously). Compared to
CC natural VIP, the analogue sequences have better in vivo stability. The
CC analogue sequences are also more persistent than natural VIP and have
CC excellent affinity for biological membranes
XX Sequence 28 AA;
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 12
AAR97810
ID AAR97810 standard; peptide; 28 AA.
AC AAR97810;
DT 22-AUG-1996 (first entry)
XX Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
KW burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX Synthetic.
XX Key Location/Qualifiers
FH Modified-site 28
FT /note= "amidated"
XX JP08040926-A.
XX 13-FEB-1996.
XX 03-AUG-1994; 94JP-00182457.
XX 03-AUG-1994; 94JP-00182457.
XX (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX WPI; 1996-157021/16.
XX Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
PT active component.

XX Claim 1; Page 2; 4pp; Japanese.
XX Vasoactive intestinal peptide and related compounds are known to have
CC strong vasodilatory activity. They have now been found to be effective in
CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
CC novel skin ulcer remedy
XX Sequence 28 AA;
Query Match 93.7%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 13
AAR93023
ID AAR93023 standard; protein; 28 AA.
XX AAR93023;
XX 09-AUG-1996 (first entry)
XX Human glucagon degrading enzyme - VIP substrate.
XX Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
KW amplification; polymerase chain reaction; probe; expression vector;
KW eukaryote; SV40 promoter; COS-7.
XX Synthetic.
XX Key Location/Qualifiers
FH Cleavage-site 17. .18
FT Modified-site 28
FT /note= "contains C-terminal amide group"
XX JP08023972-A.
XX 30-JAN-1996.
XX 19-JUL-1994; 94JP-00187936.
XX 19-JUL-1994; 94JP-00187936.
XX (SUNR) SUNTORY LTD.
XX WPI; 1996-133414/14.
XX New glucagon decomposing enzyme, and DNA encoding it - for specifically
PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT and treatment of diseases caused by excess glucagon and VIP.
XX Claim 1; Page 2; 18pp; Japanese.
XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
CC cleavage of glucagon, vasoactive intestinal peptide and selectin
CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC library with an anti-GDE peptide antibody, amplifying the inserts with
CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC This screening resulted in the full length clone designated lambda GDE4-
CC 2. The coding region of the clone was subsequently PCR amplified by the
CC primers AAT11576-7 and inserted into the eukaryotic expression vector
CC pKDCR under control of the SV40 promoter for production of the protein in
CC COS-7 cells. The protein is useful in preventing and treating diseases
CC characterised by an excess of glucagon or vasoactive intestinal peptide


```

XX SQ      Sequence 28 AA;
      Query Match      93.7%; Score 134; DB 2; Length 28;
      Best Local Similarity 96.4%; Pred. NO. 1.3e-10;
      Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
AAW65188
ID AAW65188 standard; peptide; 28 AA.
XX
AC AAW65188;
XX
DT 02-OCT-1998 (first entry)
XX
DE Vasoactive intestinal peptide (VIP) analogue.
XX
KW Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
KW vasopressin; vasoactive intestinal peptide; VIP.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 28 /note= "C-terminal amide"
FT
XX
XX US5527882-A.
XX
PD 18-JUN-1996.
XX
PF 07-NOV-1994; 94US-00335202.
XX
PR 07-JUL-1989; 89US-00376839.
XX
PR 16-SEP-1992; 92US-00945664.
XX
PA (REGC ) UNIV CALIFORNIA.
XX
PI Young JD, Mitchell AR;
XX
XX WPI; 1996-299898/30.
XX
DR
XX
XX New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
XX agonists or antagonists, useful e.g. as analgesics.
XX
PS Disclosure; Col 7-8; 15pp; English.
XX
CC The invention relates to the obtaining of a potent agonist or antagonist
CC peptide by the replacement of selected amino acids with synthetic achiral
CC amino acids. The present sequence represents a vasoactive intestinal
CC peptide (VIP) analogue, where at least one of Phe6 and Met17 is intended
CC to be replaced by N-benzylglycine, N-cyclohexylmethylglycine or the ring
CC substituted derivatives thereof
XX
XX SQ      Sequence 28 AA;
      Query Match      93.7%; Score 134; DB 2; Length 28;
      Best Local Similarity 96.4%; Pred. NO. 1.3e-10;
      Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
AAW06120
ID AAW06120 standard; peptide; 28 AA.

```

```

XX AC      AAW06120;
XX
XX 16-JUL-1997 (first entry)
XX
XX Human VIP peptide.
XX
XX Vasoactive intestinal peptide; VIP; immunise; egg-laying bird; turkey;
XX food-producing animal; egg production; feed utilisation.
XX
XX Homo sapiens.
XX
XX WO9634958-A1.
XX
XX 07-NOV-1996.
XX
XX 03-MAY-1996; 96WO-CA000280.
XX
XX 03-MAY-1995; 95US-00433108.
XX
XX (BIOS-) BIOSTAR INC.
XX
XX Cox GJ, Weeks-Levy C;
XX
XX WPI; 1996-506160/50.
XX
XX New recombinant vasoactive intestinal peptide(s) - used to immunise birds
XX for increasing egg prodn. or animals for increasing food utilisation.
XX
XX Disclosure; Fig 1; 47pp; English.
XX
XX The sequences given in AAW06110-23 represent vasoactive intestinal peptides
XX (VIP's) from various species. These peptides, or fragments representing
XX residues 1-10 (peptide V1), 7-16 (peptide V2), 13-22 (peptide V3) and 19-
XX 28 (peptide V4) may be used for immunising egg-laying birds, pref.
XX turkeys, or food-producing animals against VIP. The immunisation is
XX useful for increasing egg prodn. in bird species and for increasing
XX efficiency of feed utilisation and rate of gain in food producing animals
XX
XX SQ      Sequence 28 AA;
      Query Match      93.7%; Score 134; DB 2; Length 28;
      Best Local Similarity 96.4%; Pred. NO. 1.3e-10;
      Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:19
Job time : 77.875 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143
Sequence: 1 HSDAVFTFNYTLRQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA.*
1: /cgn2_6/ptodata/1/iaa/5 COMB.pep.*
2: /cgn2_6/ptodata/1/iaa/6 COMB.pep.*
3: /cgn2_6/ptodata/1/iaa/H COMB.pep.*
4: /cgn2_6/ptodata/1/iaa/PCTUS COMB.pep.*
5: /cgn2_6/ptodata/1/iaa/RE COMB.pep.*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	143	100.0	28	US-09-528-200-2	Sequence 2, Appli
2	138	96.5	28	US-09-528-200-6	Sequence 6, Appli
3	134	93.7	28	US-07-690-300B-1	Sequence 1, Appli
4	134	93.7	28	US-07-676-987A-1	Sequence 1, Appli
5	134	93.7	28	US-07-868-906-1	Sequence 1, Appli
6	134	93.7	28	US-08-201-092-1	Sequence 1, Appli
7	134	93.7	28	US-07-924-054-11	Sequence 11, Appli
8	134	93.7	28	US-08-243-082-1	Sequence 1, Appli
9	134	93.7	28	US-08-361-443-1	Sequence 1, Appli
10	134	93.7	28	US-08-288-681A-1	Sequence 1, Appli
11	134	93.7	28	US-07-776-272-26	Sequence 26, Appli
12	134	93.7	28	US-08-308-729-1	Sequence 1, Appli
13	134	93.7	28	US-08-062-472B-40	Sequence 40, Appli
14	134	93.7	28	US-08-171-701A-1	Sequence 1, Appli
15	134	93.7	28	US-08-741-678-1	Sequence 1, Appli
16	134	93.7	28	US-08-519-180-2	Sequence 2, Appli
17	134	93.7	28	US-08-414-424-1	Sequence 1, Appli
18	134	93.7	28	US-08-413-708B-1	Sequence 1, Appli
19	134	93.7	28	US-08-818-253-37	Sequence 37, Appli
20	134	93.7	28	US-08-897-624-1	Sequence 1, Appli
21	134	93.7	28	US-08-930-845-1	Sequence 1, Appli
22	134	93.7	28	US-08-952-568-3	Sequence 3, Appli
23	134	93.7	28	US-08-952-568-4	Sequence 4, Appli
24	134	93.7	28	US-08-952-568-5	Sequence 5, Appli
25	134	93.7	28	US-08-952-568-6	Sequence 6, Appli
26	134	93.7	28	US-08-952-568-10	Sequence 10, Appli
27	134	93.7	28	US-08-952-568-11	Sequence 11, Appli

28	134	93.7	28	2	US-08-952-568-12	Sequence 12, Appli
29	134	93.7	28	2	US-08-952-568-13	Sequence 13, Appli
30	134	93.7	28	2	US-09-192-048-21	Sequence 21, Appli
31	134	93.7	28	2	US-08-893-749-2	Sequence 2, Appli
32	134	93.7	28	2	US-08-818-252-37	Sequence 37, Appli
33	134	93.7	28	2	US-09-260-846-16	Sequence 16, Appli
34	134	93.7	28	2	US-08-842-322-31	Sequence 31, Appli
35	134	93.7	28	2	US-09-333-842-1	Sequence 1, Appli
36	134	93.7	28	2	US-09-446-352B-1	Sequence 53, Appli
37	134	93.7	28	2	US-09-316-919-53	Sequence 1, Appli
38	134	93.7	28	2	US-09-630-335-1	Sequence 1, Appli
39	134	93.7	28	2	US-09-629-632A-1	Sequence 3, Appli
40	134	93.7	28	2	US-09-528-200-3	Sequence 4, Appli
41	134	93.7	28	2	US-09-528-200-4	Sequence 5, Appli
42	134	93.7	28	2	US-09-528-200-5	Sequence 196, Appli
43	134	93.7	28	2	US-09-528-200-196	Sequence 53, Appli
44	134	93.7	28	2	US-09-316-920A-53	Sequence 1, Appli
45	134	93.7	28	2	US-09-646-046-1	

ALIGNMENTS

RESULT 1
US-09-528-200-2
; Sequence 2, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-2

Query Match 100.0%; Score 143; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 2e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRQMAVKYLSILN 28
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DB 1 HSDAVFTFNYTLRQMAVKYLSILN 28

RESULT 2
US-09-528-200-6
; Sequence 6, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

```

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 6
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-6

Query Match          96.5%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 9.9e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO

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; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match          93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/676,987A
; FILING DATE: 19910329
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: REPPER, GEORGE R.
; REGISTRATION NUMBER: 31,414
; REFERENCE/DOCKET NUMBER: 1783-101
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 783-6040
; TELEFAX: (202) 783-6031
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match          93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki

```

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/ APPLICATION NUMBER: US/08/201,092
/ FILING DATE: 24-FEB-1994
/ CLASSIFICATION:
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: JP 2-165739
/ FILING DATE: 26-JUN-1990
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: JP 2-408425
/ FILING DATE: 27-DEC-1990
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/704,143
/ FILING DATE: 22-MAY-1991
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Oram Jr., George E.
/ REGISTRATION NUMBER: 27,931
/ REFERENCE/DOCKET NUMBER: N910809
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202)-659-2930
/ TELEFAX: (202)-887-0357
/ TELEX: 440142
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
/ FRAGMENT TYPE: C-terminal
/ ORIGINAL SOURCE:
/ ORGANISM: Homo sapiens
/ TISSUE TYPE: Small intestine, proximal
/ US-08-201-092-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels

QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-07-924-054-11
/ Sequence 11, Application US/07924054
/ Patent No. 5486472
/ GENERAL INFORMATION:
/ APPLICANT: SUZUKI, No. 5486472uhiro
/ APPLICANT: KITADA, Chieko
/ APPLICANT: TSUDA, Masao
/ TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
/ NUMBER OF SEQUENCES: 11
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
/ STREET: 130 Water Street
/ CITY: Boston
/ STATE: Massachusetts
/ COUNTRY: US
/ ZIP: 02109
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/924,054
/ FILING DATE: 19920903
/ CLASSIFICATION: 435
/ ATTORNEY/AGENT INFORMATION:
/ NAME: RESNICK, David S
/ REGISTRATION NUMBER: 34235
/ REFERENCE/DOCKET NUMBER: 40805
/ TELECOMMUNICATION INFORMATION:

```

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; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STR UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-07-924-054-11

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/243,082
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/853,754
; FILING DATE: 05-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Schneller, John W.
; REGISTRATION NUMBER: 26,031
; REFERENCE/DOCKET NUMBER: KUWAT 0010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 828-8000
; TELEFAX: (202) 828-8038
; TELEX: SPENCER 64267
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
; US-08-243-082-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshida, Shigeaki
; APPLICANT: Ishida, Tautomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/361,443
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP Hei. 5-319815
; FILING DATE: 20-DEC-1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-361-443-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSCRIPTION
; TITLE OF INVENTION: OF CELLS
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSES: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA

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Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;

; MOLECULE TYPE: PEPTIDE
US-08-741-678-1

Query Match 93.7%; Score 134; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3 6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | |

Search completed: January 25, 2006, 15:23:43
Job time : 21.875 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-2

Perfect score: 143

Sequence: 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

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Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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2: /cgn2_6/prodata1/pubpaa/US08_PUBCOMB.pep.*
3: /cgn2_6/prodata1/pubpaa/US09_PUBCOMB.pep.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	135	94.4	28	US-09-929-818-187	Sequence 187, App
2	135	94.4	28	US-09-929-818-188	Sequence 188, App
3	134	93.7	28	US-09-929-818-1	Sequence 1, Appl
4	134	93.7	28	US-09-929-818-189	Sequence 189, App
5	134	93.7	28	US-09-929-818-190	Sequence 190, App
6	134	93.7	28	US-09-929-818-191	Sequence 191, App
7	134	93.7	28	US-09-929-818-192	Sequence 192, App
8	134	93.7	28	US-09-929-818-193	Sequence 193, App
9	134	93.7	28	US-09-929-818-194	Sequence 194, App
10	134	93.7	28	US-09-929-818-195	Sequence 195, App
11	134	93.7	28	US-09-929-818-196	Sequence 196, App
12	134	93.7	28	US-09-929-818-197	Sequence 197, App
13	134	93.7	28	US-09-929-818-198	Sequence 198, App
14	134	93.7	28	US-09-929-818-199	Sequence 199, App
15	134	93.7	28	US-09-929-818-200	Sequence 200, App
16	134	93.7	28	US-09-929-818-201	Sequence 201, App
17	134	93.7	28	US-09-929-818-202	Sequence 202, App
18	134	93.7	28	US-09-929-818-203	Sequence 203, App
19	134	93.7	28	US-09-929-818-204	Sequence 204, App
20	134	93.7	28	US-09-929-818-205	Sequence 205, App
21	134	93.7	28	US-09-929-818-206	Sequence 206, App
22	134	93.7	28	US-09-929-818-207	Sequence 207, App
23	134	93.7	28	US-09-929-818-208	Sequence 208, App
24	134	93.7	28	US-09-929-818-209	Sequence 209, App
25	134	93.7	28	US-09-929-818-210	Sequence 210, App
26	134	93.7	28	US-09-929-818-211	Sequence 211, App
27	134	93.7	28	US-09-929-818-212	Sequence 212, App

28 134 93.7 28 5 US-10-930-548-3 Sequence 3, Appl
29 134 93.7 28 5 US-10-770-712-56 Sequence 56, Appl
30 134 93.7 28 5 US-10-799-897A-1 Sequence 1, Appl
31 134 93.7 28 6 US-11-066-697-454 Sequence 454, App
32 134 93.7 28 6 US-11-066-697-455 Sequence 455, App
33 134 93.7 29 4 US-10-131-543-11 Sequence 11, Appl
34 134 93.7 29 4 US-10-131-546-11 Sequence 11, Appl
35 134 93.7 29 4 US-10-131-546-11 Sequence 11, Appl
36 134 93.7 29 4 US-10-415-024-11 Sequence 11, Appl
37 134 93.7 29 6 US-11-088-596-11 Sequence 11, Appl
38 134 93.7 29 6 US-11-086-966-11 Sequence 11, Appl
39 134 93.7 30 3 US-09-929-818-203 Sequence 203, App
40 134 93.7 30 3 US-09-929-818-204 Sequence 204, App
41 134 93.7 30 3 US-09-929-818-205 Sequence 205, App
42 134 93.7 31 4 US-10-131-543-9 Sequence 9, Appl
43 134 93.7 31 4 US-10-131-543-10 Sequence 10, Appl
44 134 93.7 31 4 US-10-131-543-16 Sequence 16, Appl
45 134 93.7 31 4 US-10-131-546-9 Sequence 9, Appl

ALIGNMENTS

RESULT 1
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-187

Query Match 94.4%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
DB 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

RESULT 2
US-09-929-818-188
; Sequence 188, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

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; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 188
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
;
US-09-929-818-188

Query Match      94.4%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
DB      1 HSDAVFTSNTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
;
US-09-929-818-1

Query Match      93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
DB      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-189
; Sequence 189, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 189
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
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US-09-929-818-189

Query Match      93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
DB      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US2002009003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 190
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
;
US-09-929-818-190

Query Match      93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
DB      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
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QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
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DB 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

RESULT 6
US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baird, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-05-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match 93.7%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:
```

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; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; FILE REFERENCE: VPAC1R, VPAC2R, and PAC1R Agonists
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-05-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 93.7%; Score 134; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DiCICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match 93.7%; Score 134; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
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; PRIOR APPLICATION NUMBER: 07/779,039
 ; PRIOR FILING DATE: 1991-10-18
 ; PRIOR APPLICATION NUMBER: 07/502,438
 ; PRIOR FILING DATE: 1990-03-30
 ; PRIOR APPLICATION NUMBER: 07/397,169
 ; PRIOR FILING DATE: 1989-08-21
 ; PRIOR APPLICATION NUMBER: 07/376,555
 ; PRIOR FILING DATE: 1989-07-07
 ; PRIOR APPLICATION NUMBER: 07/317,941
 ; PRIOR FILING DATE: 1989-03-02
 ; PRIOR APPLICATION NUMBER: 07/282,328
 ; PRIOR FILING DATE: 1988-12-09
 ; PRIOR APPLICATION NUMBER: 07/257,998
 ; PRIOR FILING DATE: 1988-10-14
 ; PRIOR APPLICATION NUMBER: 07/248,771
 ; PRIOR FILING DATE: 1988-09-23
 ; Prior Application data removed - See File Wrapper or PALM.
 ; NUMBER OF SEQ ID NOS: 26
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 17
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-004-530A-17

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
 US-10-114-716A-3
 ; Sequence 3, Application US/10114716A
 ; Publication No. US20030078203A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Sudhir Paul
 ; APPLICANT: Yasuhiro Nishiyama
 ; TITLE OF INVENTION: Covalently Reactive Transition State
 ; TITLE OF INVENTION: Analogs and Methods of Use Thereof
 ; FILE REFERENCE: UTH001HB
 ; CURRENT APPLICATION NUMBER: US/10/114,716A
 ; CURRENT FILING DATE: 2002-04-01
 ; PRIOR APPLICATION NUMBER: 09/862,849
 ; PRIOR FILING DATE: 2001-05-22
 ; PRIOR APPLICATION NUMBER: 09/046,373
 ; PRIOR FILING DATE: 1998-03-23
 ; PRIOR APPLICATION NUMBER: 60/280,624
 ; PRIOR FILING DATE: 2001-03-31
 ; NUMBER OF SEQ ID NOS: 57
 ; SOFTWARE: FastSeq for Windows Version 3.0
 ; SEQ ID NO 3
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Vasoactive intestinal peptide
 US-10-114-716A-3

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 12
 US-10-211-994-1
 ; Sequence 1, Application US/10211994
 ; Publication No. US20030082201A1

; GENERAL INFORMATION:
 ; APPLICANT: Rao, M.R.S.
 ; APPLICANT: Sengupta, Paromita
 ; APPLICANT: Prasad, Sudhanand
 ; APPLICANT: Burman, Anand C.
 ; APPLICANT: Mukherjee, Rama
 ; APPLICANT: Thomas, Becky
 ; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
 ; FILE REFERENCE: U014152-1
 ; CURRENT APPLICATION NUMBER: US/10/211,994
 ; CURRENT FILING DATE: 2002-08-02
 ; PRIOR APPLICATION NUMBER: 60/309,975
 ; PRIOR FILING DATE: 2001-08-03
 ; NUMBER OF SEQ ID NOS: 29
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 1
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Sus barbatus
 US-10-211-994-1

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
 US-10-197-954-145
 ; Sequence 145, Application US/10197954
 ; Publication No. US20030119021A1
 ; GENERAL INFORMATION:
 ; APPLICANT: K"ster, Hubert
 ; APPLICANT: Siddiqi, Suhail
 ; APPLICANT: Little, Daniel
 ; TITLE OF INVENTION: Capture Compounds, Collections Thereof
 ; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
 ; TITLE OF INVENTION: Compositions
 ; FILE REFERENCE: 24743-2305
 ; CURRENT APPLICATION NUMBER: US/10/197,954
 ; CURRENT FILING DATE: 2002-07-16
 ; PRIOR APPLICATION NUMBER: 60/306,019
 ; PRIOR FILING DATE: 2001-07-16
 ; PRIOR APPLICATION NUMBER: 60/314,123
 ; PRIOR FILING DATE: 2001-08-21
 ; PRIOR APPLICATION NUMBER: 60/363,433
 ; PRIOR FILING DATE: 2002-03-11
 ; NUMBER OF SEQ ID NOS: 149
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 145
 ; LENGTH: 28
 ; TYPE: PRT
 ; ORGANISM: Homo Sapien
 US-10-197-954-145

Query Match 93.7%; Score 134; DB 4; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
 US-10-100-256B-1
 ; Sequence 1, Application US/10100256B
 ; Publication No. US20030152511A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Thakur, Madhukar

; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; FILE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 93.7%; Score 134; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C. ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 93.7%; Score 134; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:03
Job time : 53.625 secs

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Result No.	Score	Query		DB	ID	Description
		Match	%			
1	134	93.7	28	7	US-11-175-690-352	Sequence 352, App
2	134	93.7	28	7	US-11-175-690-353	Sequence 353, App
3	134	93.7	637	7	US-11-175-690-265	Sequence 265, App
4	134	93.7	637	7	US-11-175-690-266	Sequence 266, App
5	98	68.5	636	7	US-11-175-690-240	Sequence 240, App
6	97	67.8	27	7	US-11-175-690-326	Sequence 326, App
7	97	67.8	27	7	US-11-175-690-327	Sequence 327, App
8	97	67.8	38	7	US-11-175-690-328	Sequence 328, App
9	97	67.8	38	7	US-11-175-690-329	Sequence 329, App
10	97	67.8	636	7	US-11-175-690-239	Sequence 239, App
11	97	67.8	647	7	US-11-175-690-241	Sequence 241, App
12	97	67.8	647	7	US-11-175-690-242	Sequence 242, App
13	73	51.0	636	7	US-11-175-690-278	Sequence 278, App
14	72	50.3	27	7	US-11-175-690-364	Sequence 364, App
15	72	50.3	27	7	US-11-175-690-365	Sequence 365, App
16	72	50.3	636	7	US-11-175-690-277	Sequence 277, App
17	61	42.7	30	7	US-11-112-277-30	Sequence 30, Appl
18	57	39.9	30	7	US-11-112-277-2	Sequence 2, Appl
19	55	38.5	30	7	US-11-112-277-29	Sequence 29, Appl
20	55	38.5	49	6	US-10-997-081A-26	Sequence 26, Appl
21	55	38.5	49	6	US-10-997-081A-27	Sequence 27, Appl
22	55	38.5	49	6	US-10-997-081A-28	Sequence 28, Appl
23	55	38.5	49	6	US-10-997-081A-29	Sequence 29, Appl
24	55	38.5	49	6	US-10-997-081A-30	Sequence 30, Appl
25	55	38.5	49	6	US-10-997-081A-31	Sequence 31, Appl

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; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match          93.7%; Score 134; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.3e-15;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1 HSDAVFTNYTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
Db      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11/175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          93.7%; Score 134; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1 HSDAVFTNYTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
Db      25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11/175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          93.7%; Score 134; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1 HSDAVFTNYTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
Db      25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11/175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          93.7%; Score 134; DB 7; Length 637;
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QY 1 HSDAVFTFNYYTRLRKQMAVKKYLSIL 27

[illegible]

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RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364

Query Match          50.1%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 3e-05;
Matches 12; Conservative 9; Mismatches 6; Indels

Qy      1 HSDAVETFNYYRLRKQWAKVKKYLSIL 27
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Db      1 HADGVFTSDPSKLLQLLSAKKYLESLM 27

RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match          50.3%   Score 72;   DB 7;   Length 27;
Best Local Similarity 44.4%   Pred. No. 3e-05;
Matches 12; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

QY      1 HSDAVFTFNYTRLRKQMAVKYLSNL 27
      | | | | | : : : | | | | : :
Db      1 HADGVFTSDFSKLGLQLSAKKYLESLM 27

Search completed: January 25, 2006, 15:31:42
Job time : 3.5 secs

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Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

N;Contains: intestinal peptide precursor - bovine (fragments)

C;Species: Bos primigenius taurus (cattle)

C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999

C;Accession: A61643; A61644; S09689

R;Carliquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.

Eur. J. Biochem. 144, 243-247, 1984

A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in

A;Reference number: A61643; MUID:85027215; PMID:6548446

A;Accession: A61643

A;Molecule type: protein

A;Residues: 1-27 <CAR>

A;Cross-references: UNIPARC:UPI0000173515

R;Carliquist, M.; Mutt, V.; Joernvall, H.

FEBS Lett. 108, 457-460, 1979

A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).

A;Reference number: A61644; MUID:80092152; PMID:520589

A;Accession: A61644

A;Molecule type: protein

A;Residues: 28-55 <CA2>

A;Cross-references: UNIPARC:UPI000002D1C0

R;Buscail, L.; Cauvin, A.; Gourlet, P.; Goessen, D.; de Neef, P.; Rathe, J.; Robberecht, Biochim. Biophys. Acta 1038, 355-359, 1990

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide

A;Reference number: S09688; MUID:90254163; PMID:2340294

A;Contents: annotation; comparison of mammalian PHI sequences

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 93.7%; Score 134; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 5.4e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 4

VRBO

N;Contains: intestinal peptide precursor - rabbit (fragments)

C;Species: Oryctolagus cuniculus (domestic rabbit)

C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998

C;Accession: B60415; A60415

R;Goessen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, Peptides 11, 123-128, 1990

A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.

A;Reference number: A60415; MUID:90259845; PMID:2342988

A;Accession: B60415

A;Molecule type: protein

A;Residues: 1-27 <GOS>

A;Cross-references: UNIPARC:UPI00000351DB

A;Accession: A60415

A;Molecule type: protein

A;Residues: 28-55 <G02>

A;Cross-references: UNIPARC:UPI00000351DB

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 93.7%; Score 134; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 5.4e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004

C;Accession: B60072; A60072; C61063; A43974

R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J. Regul. Pept. 32, 169-179, 1991

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide 1

A;Reference number: A60072; MUID:91239834; PMID:2034821

A;Accession: B60072

A;Molecule type: protein

A;Residues: 1-27 <BOU>

A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515

A;Accession: A60072

A;Molecule type: protein

A;Residues: 28-55 <BO2>

A;Cross-references: UNIPARC:UPI000002D1C0

R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A. Regul. Pept. 38, 145-154, 1992

A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreacti

A;Reference number: A61063; MUID:92245116; PMID:1574609

A;Accession: C61063

A;Molecule type: protein

A;Residues: 28-55 <MIY>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Experimental source: hypothalamus, intestine

R;Gafvelin, G. Peptides 11, 703-706, 1990

A;Title: Isolation and primary structure of VIP from sheep brain.

A;Reference number: A43974; MUID:91045331; PMID:2235680

A;Accession: A43974

A;Molecule type: protein

A;Residues: 28-55 <GAF>

A;Cross-references: UNIPARC:UPI000002D1C0

A;Experimental source: brain

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;

F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 93.7%; Score 134; DB 1; Length 55;

Best Local Similarity 96.4%; Pred. No. 5.4e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

N;Contains: intestinal peptide precursor - pig (fragments)

C;Species: Sus scrofa domestica (domestic pig)

C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004

C;Accession: A01549; A60300; A01550; J00417; A56754; S09690

R;Tatemoto, K.; Mutt, V. Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981

A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),

A;Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
A;Molecule type: protein
A;Residues: 1-27 <TAT>
A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R;Tatemoto, K.
Regul. Pept. 6, 330, 1983
A;Title: PHI - a new brain-gut peptide.
A;Reference number: A60300
A;Accession: A60300
A;Molecule type: protein
A;Residues: 1-27 <TA2>
A;Cross-references: UNIPARC:UPI00000351DB

R;Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974

A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A;Reference number: A01550; MUID:74167323; PMID:4829446
A;Accession: A01550
A;Molecule type: protein
A;Residues: 28-55 <MUT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Garavito, G.; Anderson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A;Title: Isolation and characterization of a variant form of vasoactive intestinal polypeptide
A;Reference number: JTO417; MUID:88335763; PMID:2843830
A;Accession: JTO417

A;Molecule type: protein
A;Residues: 28-58 <GAF>

A;Cross-references: UNIPARC:UPI000002B99A

A;Note: this extended form is active in a VIP assay but is probably an incompletely processed form

R;Bodanszky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974
A;Reference number: A26231; MUID:74308014; PMID:4854585
A;Contents: annotation
A;Note: a 28-residue peptide having the sequence and biological activities (in two assays) of the 27-residue peptide
R;Ichiki, Y.; Kitamura, K.; Kawagawa, K.; Matsuo, H.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A;Reference number: A56754; MUID:93038640; PMID:1329741
A;Accession: A56754

A;Molecule type: protein
A;Residues: 1-24 <ICH>

A;Cross-references: UNIPARC:UPI0000173514

A;Experimental source: duodenum

A;Note: Sequence extracted from NCBI backbone (NCBIP:114219)

R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, J.
Biochim. Biophys. Acta 1038, 355-359, 1990

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09689; MUID:90254163; PMID:2340294
A;Contents: annotation
C;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin assay)
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; neuropeptide
F;1-27/Product: Peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (asn) (amide in mature form from following glycosylation)

Query Match 93.7%; Score 134; DB 1; Length 58;
Best Local Similarity 96.4%; Pred. No. 5.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKYLSILN 28
DB 28 HSDAVFTFNYYTLRKQMAVKYLSILN 55

RESULT 7

A60038
A;Title: intestinal peptide precursor - crab-eating macaque (fragment)
C;Species: Macaca fascicularis (crab-eating macaque)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-145 <BEN>
A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil

Query Match 93.7%; Score 134; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 1.5e-12;
Matches 27; Conservative 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYTLRKQMAVKYLSILN 28
DB 100 HSDAVFTFNYYTLRKQMAVKYLSILN 127

RESULT 8

VSRHU
A;Title: intestinal peptide precursor [validated] - human
N;Alternate names: VIP precursor
N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vas
C;Species: Homo sapiens (man)
C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004
C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A01;
R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985

A;Title: Structure of the human vasoactive intestinal polypeptide gene.
A;Reference number: A90952; MUID:86004065; PMID:3899557
A;Accession: A23296
A;Molecule type: DNA
A;Residues: 1-170 <TSU>
A;Cross-references: UNIPARC:UPI000003B343; GB:M11553; NID:g340243; PIDN:;
A;Note: the authors translated the codon GAA for residue 48 as Gln
R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983

A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pepti
A;Reference number: A93313; MUID:83271523; PMID:6571696
A;Accession: A93313
A;Molecule type: mRNA
A;Residues: 1-170 <ITO>
A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA61;
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987

A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at
A;Reference number: A60205; MUID:87140054; PMID:2434617
A;Accession: A60205
A;Molecule type: mRNA
A;Residues: 78-155 <GOZ>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:g340250; PIDN:AAA61;
A;Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron
R;Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson
Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide
A;Reference number: A26361; MUID:87092456; PMID:3025882
A;Accession: A26361
A;Molecule type: DNA
A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>
A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:;
A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1
R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987

A;Title: Isolation, characterization, and pharmacological actions of peptide histidine va
A;Reference number: A27419; MUID:88007645; PMID:3654650
A;Accession: A27419
A;Molecule type: protein
A;Residues: 81-122 <YIA>
A;Cross-references: UNIPARC:UPI00000351DE
R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a p
A:Reference number: JH0618; MUID:92287083; PMID:1318039
A:Accession: JH0618
A:Molecule type: protein
A:Residues: 125-152 <KIT>
A:Cross-references: UNIPARC:UPI000002D1C0
A:Experimental source: pheochromocytoma
R:Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaiharu, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A:Reference number: I51955; MUID:88267775; PMID:2833091
A:Accession: I51955
A>Status: translated
A:Molecule type: DNA
A:Residues: 1-170 <RES>
A:Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
R:Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene. Putative mechanism of information storage a
A:Reference number: I56494
A:Accession: I56494
A>Status: preliminary; translated from GB/EMBL/DBBJ
A:Molecule type: DNA
A:Residues: 78-155 <RE2>
A:Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
R:Bloom, S.R.; Christofides, N.D.; Delamarier, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhea in vipoma patients associated with cosecretion of a second active pep
A:Reference number: I56988; MUID:84066682; PMID:6139527
A:Accession: I56988
A>Status: preliminary; translated from GB/EMBL/DBBJ
A:Molecule type: mRNA
A:Residues: 50-170 <RE3>
A:Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:G340247; PIDN:AAAG3268.1; PID:
C:Genetics:
A:Gene: GDB:VIP
A:Cross-references: GDB:120490; OMIM:192320
A:Map position: 6q26-6q27
A:Introns: 36/2; 77/2; 112/2; 156/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuro
F:1-20/Domain: signal sequence #status predicted <SIG>
F:81-107/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F:81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F:125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F:68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTFNTRLRKQMAVKYKLSILN 28
Db 125 HSDAVFTFNTRLRKQMAVKYKLSILN 152
RESULT 9
VRR
vasoactive intestinal peptide precursor - rat
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Rattus norvegicus (Norway rat)
C>Date: 28-Feb-1986 #sequence_revision 30-Jun-1993 #text change 09-Jul-2004
C:Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R:Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A:Reference number: A60053; MUID:90244869; PMID:2159586
A:Accession: A60053
A:Molecule type: DNA
A:Residues: 1-170 <GIL>

A:Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A>Note: the authors translated the codon GAG for residue 67 as Gln
R:Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60037; MUID:91232388; PMID:1851524
A:Accession: B60037
A>Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 78-155 <LAM>
A:Cross-references: UNIPARC:UPI0000173511
R:Nishizawa, M.; Hayakawa, Y.; Yanaiharu, N.; Okamoto, H.
PEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A:Reference number: A01548; MUID:85154612; PMID:3838518
A:Accession: A01548
A:Molecule type: mRNA
A:Residues: 9-170 <NIS>
A:Cross-references: UNIPARC:UPI0000170B33; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G:
A:Experimental source: cerebral cortex
R:Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinct vasoactive intestinal peptides from rat basophilic leu
A:Reference number: A28102; MUID:88243784; PMID:3379062
A:Accession: A28102
A:Molecule type: protein
A:Residues: 134-152 <GOE>
A:Cross-references: UNIPARC:UPI00000351E4
A>Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R:Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rahe, J.; Robberecht, P.; Christ
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucineamide (PHI)-(1-27)-Gly as a new major form of PHI in
A:Reference number: A60586; MUID:89338237; PMID:2759027
A:Accession: A60586
A:Molecule type: protein
A:Residues: 81-108 <CAU>
A:Cross-references: UNIPARC:UPI0000173512
R:Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucineamid
A:Reference number: A60587; MUID:90005222; PMID:2792003
A:Accession: A60587
A:Molecule type: protein
A:Residues: 81-122 <CA2>
A:Cross-references: UNIPARC:UPI0000173513
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rahe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Contents: annotation; comparison of mammalian PHI sequences
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C:Genetics:
A:Introns: 36/2; 77/2; 156/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F:1-21/Domain: signal sequence #status predicted <SIG>
F:81-122/Product: PHI-42 #status experimental <PH42>
F:81-108/Product: PHI-27-Gly #status experimental <PHIG>
F:81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTFNTRLRKQMAVKYKLSILN 28
Db 125 HSDAVFTFNTRLRKQMAVKYKLSILN 152

RESULT 10
A60037
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestinal; neuro peptide; vasodil
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Mus musculus (house mouse)
C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C:Accession: A60037; 149386
R:Ramperini, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A:Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60037; MUID:91232388; PMID:1851524
A:Accession: A60037
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-170 <LAM>
A:Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R:Sen, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A:Title: High conservation of upstream regulatory sequences on the human and mouse vaso
A:Reference number: 149386; MUID:95201289; PMID:7894056
A:Accession: 149386
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-35 <RES>
A:Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; MUID:9895871; PIDN:CAA52350.1; PI
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C:Genetics:
A:Gene: VIP
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F:1-21/Domain: signal sequence #status predicted <SIG>
F:81-107/Product: PHI-27 #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 93.7%; Score 134; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 11
VRGP
vasoactive intestinal peptide precursor - guinea pig (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Cavia porcellus (guinea pig)
C:Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C:Accession: A26175; S08688; A57082; B60304
R:Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A:Title: Guinea pig has a unique mammalian VIP.
A:Reference number: A26175; MUID:85225523; PMID:4004849
A:Accession: A26175
A:Molecule type: protein
A:Residues: 28-55 <DUB>
A:Cross-references: UNIPROT:P04566; UNIPARC:UPI0000035182
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Robbersrecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S08688; MUID:90254163; PMID:2340294
A:Accession: S08688
A:Molecule type: protein
A:Residues: 1-27 <BUS>
A:Cross-references: UNIPARC:UPI0000173516
A:Accession: A57082
A:Molecule type: protein
A:Residues: 28-55 <BU2>
A:Cross-references: UNIPARC:UPI0000173516

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestinal; neuro peptide; vasodil
F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental
Query Match 84.6%; Score 121; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 4.6e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSILN 28
DB 28 HSDALFTDYYTLRKQMAVKKYLNSVLN 55

RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C:Species: Gallus gallus (chicken)
C:Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S47470; A91425; A90720; A01551
R:Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A:Description: Evidence for alternative splicing of the chicken VIP gene.
A:Reference number: S47470
A:Accession: S47470
A:Molecule type: mRNA
A:Residues: 1-165 <TAL>
A:Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; MUID:9531364; PIDN
R:Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A:Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine. 1
A:Reference number: A91425; MUID:76210823; PMID:1227973
A:Accession: A91425
A:Molecule type: protein
A:Residues: 94-121 <NIL>
A:Cross-references: UNIPARC:UPI00000351E1
R:Bobadazsky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A:Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A:Reference number: A90720
A:Accession: A90720
A:Contents: synthesis
A:Molecule type: protein
A:Residues: 107-121 <BOD>
A:Cross-references: UNIPARC:UPI0000173517
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; neuro peptide
F:1-25/Domain: signal sequence #status predicted <SIG>
F:94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F:121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl
Query Match 83.2%; Score 119; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 2.9e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTFNYYTLRKQMAVKKYLNSIL 27
DB 94 HSDAVFTDNYTLRKQMAVKKYLNSVL 120

RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C:Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C:Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C:Accession: A60303; A60314; S07432
R:Dimaline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A:Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A:Reference number: A60303
A:Accession: A60303

A;Accession: JQ0361
A;Molecule type: protein
A;Residues: 1-25 <THW>
A;Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
A;Note: this reference is an abstract
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 75.5%; Score 108; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 1.7e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYRLRKQMAVKKYLNS 25
||||| :|:|||||
Db 1 HSDAVFTDNYSRFRKQMAVKKYLNS 25
||||| :|:|||||

Search completed: January 25, 2006, 15:20:36
Job time : 13.25 secs

A;Molecule type: protein
A;Residues: 1-28 <DIM>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A;Note: this reference is an abstract
R;Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI00001762D
R;Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A;Reference number: S07432
A;Accession: S07432
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <DI3>
A;Cross-references: UNIPARC:UPI000013884B
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 82.5%; Score 118; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 6.3e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYRLRKQMAVKKYLNSIL 27
||||| :|:|||||
Db 1 HSDAVFTDNYSRIRKQMAVKKYLNSLL 27
||||| :|:|||||

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N;Alternate names: VIP
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C;Accession: A38232
R;Eng. J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A;Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A;Reference number: A38232; MUID:92179271; PMID:1542675
A;Accession: A38232
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A;Note: sequence extracted from NCBI backbone (NCBIP:87215)
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 77.6%; Score 111; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 6.9e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTFNYYRLRKQMAVKKYLNSILN 28
||||| :|:|||||
Db 1 HSDAVFTDSYTRLLKQMAVRKYLDSILN 28
||||| :|:|||||

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C;Accession: JQ0361
R;Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A;Title: Isolation and characterisation of two teleost VIP's.
A;Reference number: JQ0361

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-2
Perfect score: 143
Sequence: 1 HSDAVFTNFTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt 05.80.*
1: uniprot_sprot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB	ID	Description
1	134	93.7	28	1	VIP_CANFA	P63289 canis famil
2	134	93.7	28	1	VIP_CAPHI	P63290 capra hircu
3	134	93.7	28	1	VIP_MACMU	P84488 macaca mula
4	134	93.7	28	1	VIP_SHEEP	P63291 ovis aries
5	134	93.7	72	1	VIP_PIG	P01284 sus scrofa
6	134	93.7	72	1	VIP_RABIT	P32549 oryctolagus
7	134	93.7	118	2	Q5TCY7_HUMAN	Q5TCY7 homo sapien
8	134	93.7	145	2	Q7MZY9_MACFA	Q7MZY9 macaca fasc
9	134	93.7	153	2	Q7TSR4_9MURI	Q7TSR4 arvicanthi
10	134	93.7	169	2	Q5TCY8_HUMAN	Q5TCY8 homo sapien
11	134	93.7	170	1	VIP_BOVIN	P81401 bos taurus
12	134	93.7	170	1	VIP_HUMAN	P01282 homo sapien
13	134	93.7	170	1	VIP_MOUSE	P32548 mus musculu
14	134	93.7	170	1	VIP_RAT	P01283 rattus norv
15	134	93.7	170	2	Q5TCY9_HUMAN	Q5TCY9 homo sapien
16	134	93.7	171	2	Q9D2Z7_MOUSE	Q9D2Z7 mus musculu
17	121	84.6	72	1	VIP_CAVPO	P04566 cavia porce
18	119	83.2	28	1	VIP_ALLMI	P81402 alligator m
19	119	83.2	28	1	VIP_RANRI	P81016 rana ridibu
20	119	83.2	70	2	Q4TZX3_ANAPL	Q4TZX3 anas platyr
21	119	83.2	86	2	Q4TZY9_9AVES	Q4TZY9 anser anser
22	119	83.2	200	1	VIP_CHICK	P48143 gallus gall
23	119	83.2	200	1	VIP_MEIGA	P45644 meleagris g
24	119	83.2	202	2	Q7ZTG8_XENLA	Q7ZTG8 xenopus lae
25	118	82.5	28	1	VIP_SCYCA	P09685 scyliorhinu
26	118	82.5	28	1	Q9PR19_AMICA	Q9PR19 amia calva
27	118	82.5	147	2	Q4SQN2_TETNG	Q4SQN2 tetraodon n
28	114	79.7	28	2	Q9PRN8_CARAU	Q9PRN8 carassius a
29	111	77.6	28	1	VIP_DIDMA	P39089 didelphis m
30	108	75.5	25	1	VIP_GADMO	P09684 gadus morhu
31	101	70.6	38	2	Q75W85_MISAN	Q75W85 misgurnus a

RESULT 1									
ID	VIP_CANFA	STANDARD;	PRT;	28	AA.				
AC	P63289; P04565;								
DT	13-AUG-1987 (Rel. 05, Created)								
DT	13-AUG-1987 (Rel. 05, Last sequence update)								
DT	13-SEP-2005 (Rel. 48, Last annotation update)								
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).								
GN	Name=VIP;								
OS	Canis familiaris (Dog).								
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;								
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;								
OC	Canis.								
OX	NCBI_TaxID=9615;								
RN	[1]								
RP	PROTEIN SEQUENCE.								
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;								
RA	Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;								
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs.";								
RL	Peptides 7 Suppl. 1:17-20(1986).								
CC	FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.								
CC	SUBCELLULAR LOCATION: Secreted.								
CC	SIMILARITY: Belongs to the glucagon family.								
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.								
CC	PIR; A60304; A60304.								
DR	HSSP; P18509; IGSA.								
DR	Ensembl; ENSCAF00000000538; Canis familiaris.								
DR	InterPro; IPR000532; Glucagon.								
DR	Pfam; PF00123; Hormone 2; 1.								
DR	PRINTS; PR00275; GLUCAGON.								
DR	SMART; SM00070; GLUCA; 1.								
DR	PROSITE; PS00260; GLUCAGON; 1.								
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.								
FT	MOD_RES 28 28 Asparagine amide.								
SQ	SEQUENCE 28 AA; 3327 MW; EF313FB573PF63F CRC64;								
Query Match 93.7%; Score 134; DB 1; Length 28;									
Best Local Similarity 96.4%; Pred. No. 7.6e-13;									
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;									
Qy	1	HSDAVFTNFTLRKQMAVKYLSILN	28						
Db	1	HSDAVFTNFTLRKQMAVKYLSILN	28						

RESULT 2

ID	VIP	CAPHI	STANDARD;	PRT;	28	AA.
AC	P63290;	P04565;				
DT	13-AUG-1987	(Rel. 05, Created)				
DT	13-AUG-1987	(Rel. 05, Last sequence update)				
DT	13-SEP-2005	(Rel. 48, Last annotation update)				
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).					
DE	Name=VIP;					
GN	Capra hircus	(Goat).				
OS	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;					
OC	Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;					
OC	Recora; Bovidae; Caprinae; Capra.					
OX	NCBI_TaxID=9925;					
OX	[1]					
RN	PROTEIN SEQUENCE.					
RP	MEDLINE=86313167;	PubMed=3748846;	DOI=10.1016/0196-9781(86)90158-0;			
RX	Eng J., Du B.-H., Raulman J.-P., Yalow R.S.;					
RA	"Purification and amino acid sequence of dog, goat and guinea pig					
RT	Peptides.";					
RL	Peptides 7 Suppl. 1:17-20(1986).					
CC	-1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,					
CC	stimulates myocardial contractility, increases glycogenolysis and					
CC	relaxes the smooth muscle of trachea, stomach and gall bladder.					
CC	-1- SUBCELLULAR LOCATION: Secreted.					
CC	-1- SIMILARITY: Belongs to the glucagon family.					
CC	CC					
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration					
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CC	use as long as its content is in no way modified and this statement is not					
CC	removed.					
CC	CC					
DR	HSP; P18509; 1GEA.					
DR	InterPro: IPR000532; Glucagon.					
DR	Pfam; PF00123; Hormone_2; 1.					
DR	PRINTS; PR00275; GLUCAGON.					
DR	SMART; SM00070; GLUCA; 1.					
DR	PROSITE; PS00260; GLUCAGON; 1.					
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.					
FT	MOD_RSS 28 28 Asparagine amide.					
FT	MOD_RSS 28 28 Asparagine amide.					
SEQ	SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;					
Query Match 93.7%; Score 134; DB 1; Length 28;						
Best Local Similarity 96.4%; Pred. No. 7.6e-13;						
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;						
Qy	1 HSDAVFTNYTLRLKQMAVKKYLNSILN 28					
Db	1 HSDAVFTNYTLRLKQMAVKKYLNSILN 28					
RESULT 3						
ID	VIP	MACMU	STANDARD;	PRT;	28	AA.
AC	P84488;					
DT	13-SEP-2005	(Rel. 48, Created)				
DT	13-SEP-2005	(Rel. 48, Last sequence update)				
DT	13-SEP-2005	(Rel. 48, Last annotation update)				
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).					
DE	Name=VIP;					
GN	Macaca mulatta	(Rhesus macaque).				
OS	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;					
OC	Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;					
OC	Cercopithecoidea; Cercopithecinae; Macaca.					
OX	NCBI_TaxID=9544;					
OX	[1]					
RN	PROTEIN SEQUENCE.					
RP	MEDLINE=91164506;	PubMed=2003150;	DOI=10.1016/0167-0115(91)90005-2;			
RX	Yu J.-H., Xin Y., Eng J., Yalow R.S.;					

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RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
RL amino-acid sequence. Use of kallikrein in its determination.";
RT Eur. J. Biochem. 42:581-589(1974).
RN [5]
RN
RX SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RX Bodanazky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RT J. Am. Chem. Soc. 96:4973-4978(1974).
RL CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycerolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC PIR; A01549; VRPG.
CC HSSP; P18509; IGEA.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC PROSITE; PS00260; GLUCAGON; 2.
CC Direct protein sequencing; Glucagon family; Hormone.
CC Amidation; Cleavage on pair of basic residues.
CC Direct protein sequencing; Glucagon family; Hormone.
CC FT PEPTIDE 1 27 Intestinal peptide PHI-27.
CC FT MOD RES 45 72 Vasoactive intestinal peptide.
CC FT MOD RES 27 72 Isoleucine amide.
CC FT MOD RES 72 72 Asparagine amide.
CC FT NON_TER 1 1
CC FT NON_TER 72 72
CC SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C1CA3A CRC64;
CC -----
CC Query Match 93.7%; Score 134; DB 1; Length 72;
CC Best Local Similarity 96.4%; Pred. No. 2.1e-12;
CC Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
CC -----
Qy 1 HSDAVTFNYYTLRKQWAVKKYLSILN 28
Db 45 HSDAVTFDNYTLRKQWAVKKYLSILN 72
CC -----
RESULT 6
VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide
DE histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP
DE (Vasoactive intestinal polypeptide)) (Fragment)].
DE Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
ON NCBI_TaxID=9986;
OX [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342998; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

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"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.";
 RT Peptides 11:123-128(1990).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC use as long as its content is in no way modified and this statement is not
 CC removed.
 CC -----
 CC HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27
 FT PEPTIDE 45 72
 FT MOD_RES 27 27
 FT MOD_RES 72 72
 FT MOD_RES 72 72
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C3CA3A CRC64;
 Query Match 93.7%; Score 134; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
 Db 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72
 RESULT 7
 Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 ID Q5TCY7_HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCY7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Name=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Hominidae;
 OC Homo.
 OC NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL333556; CA21766.1; -; Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
 Query Match 93.7%; Score 134; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 3.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
 Db 74 HSDAVFTDNYTLRKQMAVKKYLNSILN 101
 RESULT 8
 Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 ID Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 AC Q7M2Y9;
 DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal peptide precursor (Fragment).
 OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 OC Cercopitheidae; Cercopithecinae; Macaca.
 OC NCBI_TaxID=9541;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 RA Benson D.L., Isackson P.J., Jones E.G.;
 RA "In situ hybridization reveals VIP precursor mRNA-containing neurons
 RT in monkey and rat neocortex."
 RL Brain Res. Mol. Brain Res. 9:169-174(1991).
 DR PIR; A60038; A60038.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 145 145
 SQ SEQUENCE 145 AA; 16324 MW; LABE5D98D53FE5C CRC64;
 Query Match 93.7%; Score 134; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 4.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTFNYTLRKQMAVKKYLNSILN 28
 Db 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127
 RESULT 9
 Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 ID Q7TSR4_9MURI PRELIMINARY; PRT; 153 AA.
 AC Q7TSR4;
 DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal polypeptide (Fragment).
 OS Arvicanthia ansorgei.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Murinae; Arvicanthis.
 OC NCBI_TaxID=204747;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Dardente H., Menet J.S., Tournier B.B., Challet E., Pevet P.,
 RA Masson-Pevet M.;
 RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY225375; AAP15167.1; -; mRNA.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.


```

RX SMART; SM00070; GLUCAG; 2.
RA PROSITE; PS00260; GLUCAGON; 2.
RT NON_TER
SQ SEQUENCE 153 AA; 17171 MW; 9CI5095D6E147A15 CRC64;

Query Match          93.7%; Score 134; DB 2; Length 153;
Best Local Similarity 96.4%; Pred.No. 4.7e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTFNYYTLRKQMVAVKKYLNSILN 28
        ||||| ||||| ||||| ||||| |||||
Db       108 HSDAVFTDNYYTLRKQMVAVKKYLNSILN 135

RESULT 10
O5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
AC O5TCY8_1
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
OS Name=VIP; ORFNames=RP4-546K19.1-002;
OC Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
RE EMBL; ALI33356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F35BDFEF47132C3 CRC64;

Query Match          93.7%; Score 134; DB 2; Length 169;
Best Local Similarity 96.4%; Pred.No. 5.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTFNYYTLRKQMVAVKKYLNSILN 28
        ||||| ||||| ||||| ||||| |||||
Db       124 HSDAVFTDNYYTLRKQMVAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptide precursor [Contains: intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE Names=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RX "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RT J. Neurosci. 22:5310-5320(2002).
RN [2]
RP TISSUE=Duodenum;
RC PROTEIN SEQUENCE OF 81-107.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

```

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OX Homo.
RN NCBI_TaxID=9606;
RN [1] NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Obata K.-I., Yanaihara N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RL 27-like peptide, PHM-27.";
RL Nature 304:547-549 (1983).
RN [2] NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaihara N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102 (1988).
RN [3] NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300 (1985).
RN [4] NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609 (1987).
RN [5] NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarier J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102 (1985).
RN [6] NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Prostate; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX MEDLINE=22398257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Klausner R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Strausberg R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Uedin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaby S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko V., Bouffard G.G.,
RA Blakesley R.M., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
RN [7] NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:11-6 (1986).
RN [8] NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancreatic carcinoma;
RN [9] NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141 (1987).
RN [10] PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013 (1987).
RN [11] PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RX MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141 (1992).
RN [12] STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464 (1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
DR EMBL; L00157; AAA61289.1; -; Genomic DNA.
DR EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
DR EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
DR EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
DR EMBL; M33027; AAA69515.1; -; Genomic DNA.
DR EMBL; M11553; AAA61284.1; -; Genomic DNA.
DR EMBL; M11549; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M11550; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M11551; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M11552; AAA61284.1; JOINED; Genomic DNA.
DR EMBL; M14623; AAA61288.1; -; Genomic DNA.
DR EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
DR EMBL; M36610; AAA61286.1; -; Genomic DNA.
DR EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
DR EMBL; BC009794; AAH09794.1; -; mRNA.
DR EMBL; M36634; AAA61287.1; -; mRNA.

EMBL; M54930; AAA63268.1; -; mRNA.
 EMBL; M32162; AAA61285.1; -; Genomic DNA.
 EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
 PIR; A23296; VRHU.
 DR HSSP; P18509; 1GEA.
 DR Ensembl; ENSG00000146469; Homo sapiens.
 DR HGNC; HGNC:12933; VIP.
 DR H-INVD; HIX0006306; -.
 DR MIM; 192320; -.
 DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
 DR GO; GO:0007589; P:fluid secretion; TAS.
 DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone; Signal.
 FT SIGNAL 1 20 Potential.
 FT PROPEP 21 79
 FT PEPTIDE 81 122 Intestinal peptide PHV-42.
 FT PEPTIDE 81 107 Intestinal peptide PHW-27.
 FT PEPTIDE 125 152 Vasoactive intestinal peptide.
 FT PROPEP 156 170
 FT MOD_RES 107 107 Methionine amide (G-108 provides amide group).
 FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
 FT CONFLICT 96 97 QL -> PP (in Ref. 7).
 FT CONFLICT 113 113 Missing (in Ref. 6).
 FT CONFLICT 116 116 S -> L (in Ref. 4).
 FT CONFLICT 136 136 R -> G (in Ref. 4).
 SQ SEQUENCE 170 AA; 19169 MW; 93EC0177F89508FD CRC64;
 Query Match 93.7%; Score 134; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 5.3e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTNYTLRKQMAVKKYLNSILN 28
 DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
 RESULT 13
 VIP_MOUSE STANDARD; PRT; 170 AA.
 AC P32648;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
 DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
 DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
 DE Names:VIP;
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 OC Muridae; Muridae; Murinae; Mus.
 NCBI_TaxID=10090;
 RN [1]
 RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
 RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
 RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
 RT "Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse.";
 RL Brain Res. Mol. Brain Res. 9:217-231(1991).
 RN [2]
 RP NUCLEOTIDE SEQUENCE OF 1-36.
 RC STRAIN=C57BL/6; TISSUE=Spleen;
 RX MEDLINE=95201289; PubMed=7894056;
 RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

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RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RA Niehizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
RT precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
RT basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60553; VRRP.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSRNOG0000018808; Rattus norvegicus.
DR GGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR0275; GLUCAGON
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT Intestinal peptide PHV-42 (By
FT similarity).
FT Intestinal peptide PHI-27.
FT Vasoactive intestinal peptide.
FT -----
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT -----
FT Isoleucine amide (G-108 provides amide
FT group).
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19079 MW; 202AEE82EBBD190B CRC64;
SQ
Query Match 93.7%; Score 134; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTFNTRLRKQMAVKKYLNSILN 152
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RESULT 15
QSTCY9 HUMAN
ID QSTCY9_HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 93.7%; Score 134; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTFNTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTFNTRLRKQMAVKKYLNSILN 152
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Search completed: January 25, 2006, 15:18:39
Job time : 77 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVTKNYTRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: Geneseqp1980s.*
2: Geneseqp1990s.*
3: Geneseqp2000s.*
4: Geneseqp2001s.*
5: Geneseqp2002s.*
6: Geneseqp2003as.*
7: Geneseqp2003bs.*
8: Geneseqp2004s.*
9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	138	97.2	28	5	ABG94141 Human vas
2	137	96.5	28	5	ABG94140 Human vas
3	137	96.5	28	5	ABG94139 Human vas
4	136	95.8	28	1	AAP10172 VIP. 3/20
5	136	95.8	28	1	AAP1039 Sequence
6	136	95.8	28	2	AAR34943 Porcine V
7	136	95.8	28	2	AAR40272 Native VI
8	136	95.8	28	2	AAR53111 Bronchodi
9	136	95.8	28	2	AAR53109 Bronchodi
10	136	95.8	28	2	AAR53110 Bronchodi
11	136	95.8	28	2	AAR87092 Vasoactiv
12	136	95.8	28	2	AAR83785 VIP. 2/19
13	136	95.8	28	2	AAR97810 Vasoactiv
14	136	95.8	28	2	AAR93023 Human glu
15	136	95.8	28	2	AAR65188 Vasoactiv
16	136	95.8	28	2	AAW06120 Human VIP
17	136	95.8	28	2	AAW06119 Mouse VIP
18	136	95.8	28	2	AAW06114 Rabbit VI
19	136	95.8	28	2	AAW06113 Macaque V
20	136	95.8	28	2	AAW06121 Pig VIP p
21	136	95.8	28	2	AAW06122 Goat VIP p
22	136	95.8	28	2	AAW06115 Dog VIP p
23	136	95.8	28	2	AAW06112 Sheep VIP
24	136	95.8	28	2	AAW37791 Vasoactiv

25	136	95.8	28	2	AAW71677	Aaw71677 Vasoactiv
26	136	95.8	28	2	AAAY30769	Aay30769 Vasoactiv
27	136	95.8	28	2	AAAY44196	Aay44196 Human vas
28	136	95.8	28	3	AAAY94560	Aay94560 Vasoactiv
29	136	95.8	28	4	AAAB85707	Aab85707 Peptide h
30	136	95.8	28	4	AAAB85710	Aab85710 Peptide h
31	136	95.8	28	4	AAAB91279	Aab91279 Vasoactiv
32	136	95.8	28	4	AAAB91278	Aab91278 Vasoactiv
33	136	95.8	28	4	AAAE12028	Aae12028 Porcine v
34	136	95.8	28	4	AAAB37111	Aab37111 Human vas
35	136	95.8	28	4	AAAG70459	Aag70459 Vasoactiv
36	136	95.8	28	4	AAAB50845	Aab50845 Human pro
37	136	95.8	28	4	AAAU09653	Aau09653 Porcine i
38	136	95.8	28	4	AAAB45614	Aab45614 Native va
39	136	95.8	28	5	AAAE19604	Aae19604 Human ste
40	136	95.8	28	5	AAAE19627	Aae19627 Human vas
41	136	95.8	28	5	AAAE19603	Aae19603 Human vas
42	136	95.8	28	5	ABBO66577	Abb066577 Mammalian
43	136	95.8	28	5	AAU85989	Aau85989 Modified
44	136	95.8	28	5	AAU97783	Aau97783 Tumour sp
45	136	95.8	28	5	ABG94138	Abg94138 Human vas

ALIGNMENTS

RESULT 1
ABG94141
ID ABG94141 standard; peptide; 28 AA.
XX AC ABG94141;
XX DT 27-NOV-2002 (first entry)
XX DE Human vasoactive intestinal polypeptide (VIP) analogue #189.
XX KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX OS Unidentified.
XX US US2002099003-A1.
XX PD 25-JUL-2002.
XX 13-AUG-2001; 2001US-00929818.
XX 28-OCT-1997; 97US-00959057.
XX 28-OCT-1997; 97US-00959064.
XX 27-OCT-1998; 98US-00181316.
XX 04-FEB-2000; 2000US-00498522.
XX (WILS/) WILSON L F.
XX (PLAC/) PLACE V A.
XX Wilson LF, Place VA;
XX WPI; 2002-697729/75.
XX Treating sexual dysfunction in females comprises administering vasoactive
XX intestinal polypeptide or against to vagina and/or vulvar region.
XX Claim 19; Page; 19pp; English.
XX The invention relates to a method for treating sexual dysfunction in
XX females comprising administering a formulation comprising a vasoactive
XX agent comprising a vasoactive intestinal polypeptide and/or agonist to
XX the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
CC and dryness, for enhancing sexual desire and responsiveness in females
CC and for maintaining improvement of the tissue health of the female
CC genitalia. The method is also used for treating persistent or recurrent
CC deficiency or absence of sexual fantasies and desire for sexual activity,
CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
CC diabetes mellitus, substance-induced decreases in sexual desire and
CC responsiveness and primary and secondary anorgasmia. The formulation
CC improves vaginal muscle tone and tissue health, increases vaginal
CC lubrication and minimises collagen misdeposition resulting from hypoxia.
CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
CC analogue with agonist and/or antagonist activity. Note: The present
CC sequence is not featured in the printed specification but was derived
CC from the wild-type peptide shown in ABG93952
XX
SQ Sequence 28 AA;

Query Match 97.2%; Score 138; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.2e-10; Indels 0; Gaps 0;
Matches 27; Conservative 1; Mismatches 0;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 2
ABG94140
ID ABG94140 standard; peptide; 28 AA.
XX
AC ABG94140;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human vasoactive intestinal polypeptide (VIP) analogue #188.
XX
KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX
OS Unidentified.
XX
PN US2002099003-A1.
XX
PD 25-JUL-2002.
XX
PF 13-AUG-2001; 2001US-00929818.
XX
PR 28-OCT-1997; 97US-00959057.
PR 28-OCT-1997; 97US-00959064.
PR 27-OCT-1998; 98US-00181316.
PR 04-FEB-2000; 2000US-00498522.
XX
XX (WILS/) WILSON L F.
PA (PLAC/) PLACE V A.
XX
XX Wilson LF, Place VA;
XX
XX WPI; 2002-697729/75.
XX
DR Treating sexual dysfunction in females comprises administering vasoactive
XX intestinal polypeptide or against to vagina and/or vulvar region.
XX
XX Claim 19; Page; 19pp; English.
XX
XX The invention relates to a method for treating sexual dysfunction in
XX females comprising administering a formulation comprising a vasoactive
XX agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing
CC vaginal atrophy and pain during intercourse, for treating vaginal itching
CC and dryness, for enhancing sexual desire and responsiveness in females
CC and for maintaining improvement of the tissue health of the female
CC genitalia. The method is also used for treating persistent or recurrent
CC deficiency or absence of sexual fantasies and desire for sexual activity,
CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
CC diabetes mellitus, substance-induced decreases in sexual desire and
CC responsiveness and primary and secondary anorgasmia. The formulation
CC improves vaginal muscle tone and tissue health, increases vaginal
CC lubrication and minimises collagen misdeposition resulting from hypoxia.
CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
CC analogue with agonist and/or antagonist activity. Note: The present
CC sequence is not featured in the printed specification but was derived
CC from the wild-type peptide shown in ABG93952
XX
SQ Sequence 28 AA;

Query Match 96.5%; Score 137; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.9e-10; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

QY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28

RESULT 3
ABG94139
ID ABG94139 standard; peptide; 28 AA.
XX
AC ABG94139;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human vasoactive intestinal polypeptide (VIP) analogue #187.
XX
KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX
OS Unidentified.
XX
PN US2002099003-A1.
XX
PD 25-JUL-2002.
XX
PF 13-AUG-2001; 2001US-00929818.
XX
PR 28-OCT-1997; 97US-00959057.
PR 28-OCT-1997; 97US-00959064.
PR 27-OCT-1998; 98US-00181316.
PR 04-FEB-2000; 2000US-00498522.
XX
XX (WILS/) WILSON L F.
PA (PLAC/) PLACE V A.
XX
XX Wilson LF, Place VA;
XX
XX WPI; 2002-697729/75.
XX
DR Treating sexual dysfunction in females comprises administering vasoactive
XX intestinal polypeptide or against to vagina and/or vulvar region.
XX
XX Claim 19; Page; 19pp; English.
XX
XX The invention relates to a method for treating sexual dysfunction in
XX females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;

Query Match 96.5%; Score 137; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
 DB 1 HSDAVFTSNYTRLRKQMAVKYLSILN 28

RESULT 4

AAP10172
 ID AAP10172 standard; peptide; 28 AA.

XX AAP10172;

DT 25-MAR-2003 (revised)

DT 21-DEC-1992 (first entry)

XX VIP.

KW Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.

XX Homo sapiens.

XX JP56128721-A.

PD 08-OCT-1981.

XX 12-MAR-1980; 80JP-00030308.

PR 12-MAR-1980; 80JP-00030308.

XX (EISA) EISAI CO LTD.

DR WPI; 1981-86052D/47.

PT Antiallergic agent comprises peptide - contg. 28 amino acid unite, is
 PT active against e.g. bronchial asthma and hay fever.

PS Claim 1; Page 1; 3pp; Japanese.

CC The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKYLSILN 28

RESULT 5

AAP71039
 ID AAP71039 standard; peptide; 28 AA.

XX AAP71039;

DT 03-OCT-2002 (revised)

DT 05-APR-1991 (first entry)

XX Sequence of active ingredient in hair growth promoting compsn.

KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 KW hair growth promoter.

XX Synthetic.

XX EP225639-A.

PD 16-JUN-1987.

XX 10-DEC-1986; 86EP-00117190.

XX 10-DEC-1985; 85JP-00276099.

XX (MEIJ) MEIJI SEIKA KAISHA.

XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkaji T;

DR WPI; 1987-164873/24.

PT Hair growth promoting compsn. - contg. vasoactive intestinal polypeptide
 PT and carrier.

PS Claim 1; Page 8; 10pp; English.

CC When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKYLSILN 28

RESULT 6

AAR34943
 ID AAR34943 standard; peptide; 28 AA.

XX AAR34943;

DT 25-MAR-2003 (revised)

DT 28-JUL-1993 (first entry)

XX Porcine VIP.

XX Vasoactive intestinal peptide; asthma; bronchodilation activity;

The sequences given in AAR53091-111 are synthetic peptides based on vasoactive intestinal peptide (VIP) which have the activity of relaxing the smooth muscle selectively and are only low toxic-non-toxic to mammals. These peptides may be used as bronchodilators. They are prepared by solid phase synthesis using a resin having an amino functional group capable of bonding to the amino acid at the carboxy terminus through a

CC carboxyl group and fixing the peptide chain during the synthesis
 XX
 SQ Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 |||||
 Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9

AAR53109
 ID AAR53109 standard; peptide; 28 AA.

AC AAR53109;

DT 20-DEC-1994 (first entry)

DE Bronchodilator peptide #19.

KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectivity; toxicity; mammal; bronchodilator.

OS Synthetic.

FH Key Location/Qualifiers

FT Misc-difference 10 /note= "D-form residue"

FT Modified-site 28

FT /note= "Amidated C-terminal"

PN JP06092991-A.

XX 05-APR-1994.

PF 28-FEB-1991; 91JP-00034335.

PR 28-FEB-1991; 91JP-00034335.

PA (DAIL) DAICEL CHEM IND LTD.

PA (MEIJ) MEIJI SEIKA KAISHA.

XX WPI; 1994-147946/18.

XX Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.

PS Disclosure; Page 5; 29pp; Japanese.

CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 |||||
 Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10

AAR53110

ID AAR53110 standard; peptide; 28 AA.

XX AAR53110;

DT 20-DEC-1994 (first entry)

DE Bronchodilator peptide #20.

XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectivity; toxicity; mammal; bronchodilator.

OS Synthetic.

FH Key Location/Qualifiers

FT Misc-difference 22

FT /note= "D-form residue"

FT Modified-site 28

FT /note= "Amidated C-terminal"

XX JP06092991-A.

XX 05-APR-1994.

PF 28-FEB-1991; 91JP-00034335.

PR 28-FEB-1991; 91JP-00034335.

PA (DAIL) DAICEL CHEM IND LTD.

PA (MEIJ) MEIJI SEIKA KAISHA.

XX WPI; 1994-147946/18.

XX Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.

PS Disclosure; Page 5; 29pp; Japanese.

CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis

XX Sequence 28 AA;

Query Match 95.8%; Score 136; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 3.9e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 |||||
 Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11

AAR87092
 ID AAR87092 standard; peptide; 28 AA.

XX AAR87092;

DT 06-JUN-1996 (first entry)

DE Vasoactive intestinal peptide, forms part of gene transfer complex.

KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
 KW gene therapy; vaccine.

XX Sus scrofa.

XX Key Location/Qualifiers

FT Modified-site 28

```
FT XX /note= "amidated"
PN FR2719316-A1.
XX
XX PD 03-NOV-1995.
XX
XX PF 28-APR-1994; 94FR-000051174.
XX
XX PR 28-APR-1994; 94FR-000051174.
XX
XX PA (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX
XX PI Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX
XX DR WPI; 1995-375617/49.
XX
XX PT New nucleic acid complexes with cationic polymers - useful for genetic
XX transformation of cells.
XX
XX PS Claim 11; Page 43; 58pp; French.
XX
XX CC In novel complexes of negatively-charged nucleic acids and positively-
XX charged polymers, the polymers comprise monomer subunits bearing NH3+
XX groups, at least 10% of which are replaced by uncharged amino groups
XX bearing a substit. that has at least one -OH group and is not recognised
XX by cell membrane receptors; the side-chain groups of the polymer (i.e.
XX the NH3+ and/or OH groups) may be substd. by a group that is recognised
XX by a cell membrane receptor, provided that at least 30% of the NH3+
XX groups remain free. The complexes are useful for transfecting particular
XX nucleic acid sequences into particular cell types, depending on the
XX identity of the cell membrane receptor ligands involved, e.g. for gene
XX therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
XX antigens recognised by lectins, natural metabolites (such as biotin,
XX tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
XX intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
XX peptide hormones such as alpha-MSH, chemotactic factors and integrin
XX ligands)
XX
XX SQ Sequence 28 AA;
Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 12
AAR83785
ID AAR83785 standard; peptide; 28 AA.
AC AAR83785;
XX
XX DT 27-FEB-1996 (first entry)
XX
XX DE VIP.
XX
XX KW VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
XX secretin; nervous system; digestive system; smooth muscle; relaxant;
XX bronchial asthma; impotence; therapy.
XX
XX OS Sus scrofa.
XX
XX FH Key Location/Qualifiers
XX Misc-difference 29
XX /note= "amidated"
XX
XX PN EP663406-A1.
XX
XX PD 19-JUL-1995.
XX
XX PT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
```

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PF 19-DEC-1994; 94EP-00120126.
XX
XX PR 20-DEC-1993; 93JP-00319815.
XX
XX PA (SANW ) SANWA KAGAKU KENKYUSHO CO.
XX
XX PI Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX
XX DR WPI; 1995-247502/33.
XX
XX PT New modified form of vasoactive intestinal polypeptide - with C-terminal
XX substd. amide residue, has greater in vivo stability and persistence,
XX useful for treating asthma and impotence.
XX
XX PS Disclosure; Page 3; 16pp; English.
XX
XX CC This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX a peptide hormone that shows smooth muscle relaxant activity. The
XX structure of VIP is similar to that of the other peptides in the glucagon
XX -secretin family, to which it belongs. VIP is present in the nervous
XX system and the digestive system tracts. It is also found in the lungs of
XX normal patients (however, it is not found in the lungs of people
XX suffering from bronchial asthma). The sequences shown in AAR83784 and
XX AAR83786 are analogues of this sequence. These analogues are found to be
XX resistant to protease digestion. The analogues can be used to treat
XX asthma (by inhalation) and impotence (percutaneously). Compared to
XX natural VIP, the analogue sequences have better in vivo stability. The
XX analogue sequences are also more persistent than natural VIP and have
XX excellent affinity for biological membranes
XX
XX SQ Sequence 28 AA;
Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 13
AAR97810
ID AAR97810 standard; peptide; 28 AA.
XX
XX AC AAR97810;
XX
XX DT 22-AUG-1996 (first entry)
XX
XX DE Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX
XX KW Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX
XX OS Synthetic.
XX
XX FH Key Location/Qualifiers
XX Modified-site 28
XX /note= "amidated"
XX
XX PN JF08040926-A.
XX
XX PD 13-FEB-1996.
XX
XX PF 03-AUG-1994; 94JP-00182457.
XX
XX PR 03-AUG-1994; 94JP-00182457.
XX
XX PA (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX
XX DR WPI; 1996-157021/16.
XX
XX PT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
```

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PT active component.
PS Claim 1; Page 2; 4pp; Japanese.
XX
CC Vasoactive intestinal peptide and related compounds are known to have
CC strong vasodilatory activity. They have now been found to be effective in
CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
CC novel skin ulcer remedy
XX
SQ Sequence 28 AA;

Query Match          95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
ID AAR93023 standard; protein; 28 AA.
XX
AC AAR93023;
XX
DT 09-AUG-1996 (first entry)
XX
DE Human glucagon degrading enzyme - VIP substrate.
XX
KW Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
KW amplification; polymerase chain reaction; probe; expression vector;
KW eukaryote; SV40 promoter; COS-7.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Cleavage-site 17..18
FT Modified-site 28
FT /note= "contains C-terminal amide group"
XX
PN JP08023972-A.
XX
PD 30-JAN-1996.
XX
PP 19-JUL-1994; 94JP-00187936.
XX
PR 19-JUL-1994; 94JP-00187936.
XX
PA (SUNR ) SUNTORY LTD.
XX
WPI; 1996-133414/14.
XX
PT New glucagon decomposing enzyme, and DNA encoding it - for specifically
PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT and treatment of diseases caused by excess glucagon and VIP.
XX
PS Claim 1; Page 2; 18pp; Japanese.
XX
CC A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
CC cleavage of glucagon, vasoactive intestinal peptide and selectin
CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC library with an anti-GDE peptide antibody, amplifying the inserts with
CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC This screening resulted in the full length clone designated lambda GDE4-
CC 2. The coding region of the clone was subsequently PCR amplified by the
CC primers AAT11576-7 and inserted into the eukaryotic expression vector
CC pKDCR under control of the SV40 promoter for production of the protein in
CC COS-7 cells. The protein is useful in preventing and treating diseases

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CC characterised by an excess of glucagon or vasoactive intestinal peptide
XX
SQ Sequence 28 AA;

Query Match          95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
ID AAW65188 standard; peptide; 28 AA.
XX
AC AAW65188;
XX
DT 02-OCT-1998 (first entry)
XX
DE Vasoactive intestinal peptide (VIP) analogue.
XX
KW Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
KW vasopressin; vasoactive intestinal peptide; VIP.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Modified-site 28
FT /note= "C-terminal amide"
XX
PN US5527882-A.
XX
PD 18-JUN-1996.
XX
PP 07-NOV-1994; 94US-00335202.
XX
PR 07-JUL-1989; 89US-00376839.
PR 16-SEP-1992; 92US-00945664.
XX
PA (REGC ) UNIV CALIFORNIA.
XX
PI Young JD, Mitchell AR;
XX
WPI; 1996-299898/30.
XX
PT New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
PT agonists or antagonists, useful e.g. as analgesics.
XX
PS Disclosure; Col 7-8; 15pp; English.
XX
CC The invention relates to the obtaining of a potent agonist or antagonist
CC peptide by the replacement of selected amino acids with synthetic achiral
CC amino acids. The present sequence represents a vasoactive intestinal
CC peptide (VIP) analogue, where at least one of Phe6 and Met17 is intended
CC to be replaced by N-benzylglycine, N-cyclohexylmethylglycine or the ring
CC substituted derivatives thereof
XX
SQ Sequence 28 AA;

Query Match          95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:20
Job time : 78.875 secs

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us-10-626-719-3.rag

Wed Feb 8 17:49:03 2006

GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
1: /cgn2_6/prodata/1/iaa/5_COMB.pep:*
2: /cgn2_6/prodata/1/iaa/6_COMB.pep:*
3: /cgn2_6/prodata/1/iaa/H_COMB.pep:*
4: /cgn2_6/prodata/1/iaa/PCUS_COMB.pep:*
5: /cgn2_6/prodata/1/iaa/RG_COMB.pep:*
6: /cgn2_6/prodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	142	100.0	28	US-09-528-200-3	Sequence 3, Appli
2	139	97.9	28	US-09-528-200-5	Sequence 5, Appli
3	138	97.2	28	US-09-528-200-4	Sequence 4, Appli
4	136	95.8	28	US-07-690-300B-1	Sequence 1, Appli
5	136	95.8	28	US-07-676-987A-1	Sequence 1, Appli
6	136	95.8	28	US-07-868-906-1	Sequence 1, Appli
7	136	95.8	28	US-08-201-092-1	Sequence 1, Appli
8	136	95.8	28	US-07-924-054-11	Sequence 11, Appli
9	136	95.8	28	US-08-243-082-1	Sequence 1, Appli
10	136	95.8	28	US-08-361-443-1	Sequence 1, Appli
11	136	95.8	28	US-08-288-681A-1	Sequence 1, Appli
12	136	95.8	28	US-07-776-272-26	Sequence 26, Appli
13	136	95.8	28	US-08-308-729-1	Sequence 1, Appli
14	136	95.8	28	US-08-062-472B-40	Sequence 40, Appli
15	136	95.8	28	US-08-171-701A-1	Sequence 1, Appli
16	136	95.8	28	US-08-741-678-1	Sequence 1, Appli
17	136	95.8	28	US-08-519-180-2	Sequence 2, Appli
18	136	95.8	28	US-08-414-424-1	Sequence 1, Appli
19	136	95.8	28	US-08-413-708B-1	Sequence 1, Appli
20	136	95.8	28	US-08-818-253-37	Sequence 37, Appli
21	136	95.8	28	US-08-897-624-1	Sequence 1, Appli
22	136	95.8	28	US-08-930-845-1	Sequence 1, Appli
23	136	95.8	28	US-08-952-568-3	Sequence 3, Appli
24	136	95.8	28	US-08-952-568-4	Sequence 4, Appli
25	136	95.8	28	US-08-952-568-5	Sequence 5, Appli
26	136	95.8	28	US-08-952-568-6	Sequence 6, Appli
27	136	95.8	28	US-08-952-568-10	Sequence 10, Appli

28	136	95.8	28	US-08-952-568-11	Sequence 11, Appli
29	136	95.8	28	US-08-952-568-12	Sequence 12, Appli
30	136	95.8	28	US-08-952-568-13	Sequence 13, Appli
31	136	95.8	28	US-09-192-048-21	Sequence 21, Appli
32	136	95.8	28	US-08-893-749-2	Sequence 2, Appli
33	136	95.8	28	US-08-818-252-37	Sequence 37, Appli
34	136	95.8	28	US-09-260-846-16	Sequence 16, Appli
35	136	95.8	28	US-08-842-322-31	Sequence 31, Appli
36	136	95.8	28	US-09-333-842-1	Sequence 1, Appli
37	136	95.8	28	US-09-446-352B-1	Sequence 1, Appli
38	136	95.8	28	US-09-316-919-53	Sequence 53, Appli
39	136	95.8	28	US-09-630-335-1	Sequence 1, Appli
40	136	95.8	28	US-09-629-632A-1	Sequence 1, Appli
41	136	95.8	28	US-09-528-200-196	Sequence 196, App
42	136	95.8	28	US-09-316-920A-53	Sequence 53, Appli
43	136	95.8	28	US-09-646-046-1	Sequence 1, Appli
44	136	95.8	28	US-09-285-422-1	Sequence 1, Appli
45	136	95.8	28	US-10-100-256B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-3
; Sequence 3, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-3

Query Match 100.0%; Score 142; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 4.5e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28

RESULT 2
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

```
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-5

Query Match          97.9%; Score 139; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-4

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; US-07-690-300B-1

Query Match          95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
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; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-07-868-906-1

Query Match          95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 7
US-08-201-092-1
; Sequence 1, Application US/08201092
; Patent No. 5428015
; GENERAL INFORMATION:
; APPLICANT: KURONO, Masayasu
; APPLICANT: MITANI, Takahiko
; APPLICANT: TAKAHASHI, Haruo
; APPLICANT: SAWAI, Kiichi
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: ANALOGUES AND USE THEREOF
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSES: Armstrong, Nikaido, Marmelstein, Kubovcik, &
; ADDRESSEE: Murray
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D. C.
; COUNTRY: U. S. A.
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
US-08-201-092-1

Query Match          95.8%; Score 136; DB 1; Length 28;

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ADDRESSEE: Spencer, Frank & Schneider
STREET: 1111 Nineteenth Street, N.W.

;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 11
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016

COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/288,681A
FILING DATE: 10-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR/94/05174
FILING DATE: 28-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CHARLES A. MUSERLIAN
REGISTRATION NUMBER: 19,683
REFERENCE/DOCKET NUMBER: 410.005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 661-8000
TELEFAX: (212) 661-8002
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28
TYPE: Amino Acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: PEPTIDE

US-08-288-681A-1
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
RESULT 12
US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshi
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/776,272
FILING DATE: 19911129
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Player, William E
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-450-23167
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELEFAX: 202-887-0605
TELEX: 440706
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: YES

US-07-776-272-26
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
RESULT 13
US-08-308-729-1
; Sequence 1, Application US/08308729
; Patent No. 5677419
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Cyclic Vasoactive Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 73
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingeland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110

US-08-308-729-1
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/308,729
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/153,530
; FILING DATE:
; APPLICATION NUMBER: US 07/773,747
; FILING DATE: 11-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8322
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; PUBLICATION INFORMATION:
; DOCUMENT NUMBER: EP 325 044 A A
; FILING DATE: 22-DEC-1987
; PUBLICATION DATE: 26-JUL-1989
; RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
;
; US-08-308-729-1
;
; Query Match 95.8%; Score 136; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 3e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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; Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
;
; RESULT 14
; US-08-622-472B-40
; Sequence 40, Application US/08062472B
; Patent No. 5695954
; GENERAL INFORMATION:
; APPLICANT: Sherwood, Nancy G M
; APPLICANT: Parker, David B
; APPLICANT: McRory, John E
; APPLICANT: Lescheid, David W
; TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: KLARQUIST, LLP
; ADDRESS: WHINSTON, LLP
; STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
; CITY: PORTLAND
; STATE: OREGON
; COUNTRY: USA
; ZIP: 97204-2988
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;
; APPLICATION NUMBER: US/08/062,472B
; FILING DATE: 14-MAY-1993
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: POLLEY, RICHARD J
; REGISTRATION NUMBER: 28107
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (503) 226-7391
; TELEFAX: (503) 228-9446
; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-062-472B-40
;
; Query Match 95.8%; Score 136; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 3e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
;
; Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
;
; RESULT 15
; US-08-171-701A-1
; Sequence 1, Application US/08171701A
; Patent No. 5721211
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TREATING SMALL CELL AND NONSMALL
; TITLE OF INVENTION: CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 3
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Floppy Disk
; COMPUTER: IBM PC Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect, Version 5.1 Plus
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/171,701A
; FILING DATE: December 22, 1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 Amino Acids
; TYPE: Amino Acid
; TOPOLOGY: Linear
; MOLECULE TYPE: Peptide
; FRAGMENT TYPE: N-terminal
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 1
; OTHER INFORMATION:
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 28
; OTHER INFORMATION:
; US-08-171-701A-1
;
; Query Match 95.8%; Score 136; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 3e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
;
; Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
;
; Search completed: January 25, 2006, 15:23:43
; Job time : 21.875 secs

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1	138	97.2	28	3	US-09-929-818-190	Sequence 190, Appl	
2	137	96.5	28	3	US-09-929-818-188	Sequence 188, Appl	
3	137	96.5	28	3	US-09-929-818-189	Sequence 189, Appl	
4	136	95.8	28	3	US-09-929-818-1	Sequence 1, Appl	
5	136	95.8	28	3	US-09-929-818-187	Sequence 187, Appl	
6	136	95.8	28	3	US-09-999-745-53	Sequence 53, Appl	
7	136	95.8	28	3	US-09-554-000-37	Sequence 37, Appl	
8	136	95.8	28	4	US-10-090-109A-1	Sequence 1, Appl	
9	136	95.8	28	4	US-10-044-722-8	Sequence 8, Appl	
10	136	95.8	28	4	US-10-004-530A-17	Sequence 17, Appl	
11	136	95.8	28	4	US-10-114-718A-3	Sequence 3, Appl	
12	136	95.8	28	4	US-10-211-994-1	Sequence 1, Appl	
13	136	95.8	28	4	US-10-197-95A-145	Sequence 145, Appl	
14	136	95.8	28	4	US-10-100-256B-1	Sequence 1, Appl	
15	136	95.8	28	4	US-10-254-569A-1	Sequence 1, Appl	
16	136	95.8	28	4	US-10-201-288-31	Sequence 31, Appl	
17	136	95.8	28	4	US-10-343-654-22	Sequence 22, Appl	
18	136	95.8	28	4	US-10-416-822-1	Sequence 1, Appl	
19	136	95.8	28	4	US-10-467-059-14	Sequence 14, Appl	
20	136	95.8	28	5	US-10-494-634-7	Sequence 7, Appl	
21	136	95.8	28	5	US-10-718-071-36	Sequence 36, Appl	
22	136	95.8	28	5	US-10-788-563-17	Sequence 17, Appl	
23	136	95.8	28	5	US-10-760-085-145	Sequence 145, Appl	
24	136	95.8	28	5	US-10-892-981A-1	Sequence 1, Appl	
25	136	95.8	28	5	US-10-769-803-2	Sequence 2, Appl	
26	136	95.8	28	5	US-10-919-325-32	Sequence 32, Appl	
27	136	95.8	28	5	US-10-998-143-1	Sequence 1, Appl	

RESULT 4
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1
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Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
RESULT 5
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-187
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Best Local Similarity 96.4%; Pred. No. 3.6e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;
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Db 1 HSDAVFTNNYTLRLKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-189
; Sequence 189, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 189
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-189
Query Match 96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;
Qy 1 HSDAVFTKNYTLRLKQMAVKKYLNSILN 28
Db 1 HSDAVFTSNYTLRLKQMAVKKYLNSILN 28


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; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; PRIOR APPLICATION data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

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Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 11
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match          95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 12
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S., Paromita
; APPLICANT: Sengupta, Prasad, Sudhanand
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Arand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

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Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K*ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

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Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar

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; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 15
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: NATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 95.8%; Score 136; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:03
Job time : 53.625 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2006 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-3

Perfect score: 142

Sequence: 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28

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Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications_AA_New.*

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- 2: /cgn2_6/prodata/2/pubpa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/prodata/2/pubpa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/prodata/2/pubpa/PCT_NEW_PUB.pep.*
- 5: /cgn2_6/prodata/2/pubpa/US09_NEW_PUB.pep.*
- 6: /cgn2_6/prodata/2/pubpa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/prodata/2/pubpa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/prodata/2/pubpa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	136	95.8	28	7	US-11-175-690-353
3	136	95.8	637	7	US-11-175-690-265
4	136	95.8	637	7	US-11-175-690-266
5	100	70.4	636	7	US-11-175-690-240
6	99	69.7	27	7	US-11-175-690-326
7	99	69.7	27	7	US-11-175-690-327
8	99	69.7	38	7	US-11-175-690-328
9	99	69.7	38	7	US-11-175-690-329
10	99	69.7	636	7	US-11-175-690-239
11	99	69.7	647	7	US-11-175-690-241
12	99	69.7	647	7	US-11-175-690-242
13	75	52.8	636	7	US-11-175-690-278
14	74	52.1	27	7	US-11-175-690-365
15	74	52.1	27	7	US-11-175-690-366
16	74	52.1	636	7	US-11-175-690-277
17	65	45.8	30	7	US-11-112-277-30
18	61	43.0	30	7	US-11-112-277-2
19	58	40.8	30	7	US-11-112-277-29
20	58	40.8	49	6	US-10-997-081A-26
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25	58	40.8	49	6	US-10-997-081A-31

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27	58	40.8	49	6	US-10-997-081A-35	Sequence 35, Appl
28	58	40.8	95	6	US-10-997-081A-25	Sequence 25, Appl
29	58	40.8	97	6	US-10-997-081A-11	Sequence 11, Appl
30	58	40.8	97	6	US-10-997-081A-18	Sequence 18, Appl
31	58	40.8	97	6	US-10-997-081A-19	Sequence 19, Appl
32	58	40.8	97	6	US-10-997-081A-20	Sequence 20, Appl
33	58	40.8	97	6	US-10-997-081A-21	Sequence 21, Appl
34	58	40.8	97	6	US-10-997-081A-22	Sequence 22, Appl
35	58	40.8	97	6	US-10-997-081A-23	Sequence 23, Appl
36	58	40.8	97	6	US-10-997-081A-40	Sequence 40, Appl
37	58	40.8	97	6	US-10-997-081A-41	Sequence 41, Appl
38	58	40.8	105	6	US-10-997-081A-10	Sequence 10, Appl
39	57	40.1	30	7	US-11-112-277-31	Sequence 31, Appl
40	51	35.9	556	7	US-11-124-368A-303	Sequence 303, App
41	51	35.9	636	7	US-11-175-690-268	Sequence 268, App
42	50	35.2	27	7	US-11-175-690-354	Sequence 354, App
43	50	35.2	27	7	US-11-175-690-355	Sequence 355, App
44	50	35.2	636	7	US-11-175-690-267	Sequence 267, App
45	46	32.4	30	7	US-11-174-089-181	Sequence 181, App

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.8%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

Best Local Similarity 96.4%; Pred. No. 5.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 610 HSDAVFTDNTYRLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 95.8%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 95.8%; Score 136; DB 7; Length 637;

APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 95.8%; Score 136; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 95.8%; Score 136; DB 7; Length 637;

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; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match          69.7%; Score 99; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 4.9e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 HSDAVFTQNYTRLRKQMAVKKYLSIL 27
DB      1 HSDGIFTDSYRYRKQMAVKKYLAAYL 27

RESULT 8
US-11-175-690-328
; Sequence 328, Application US/11/175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match          69.7%; Score 99; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 7.4e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

QY      1 HSDAVFTQNYTRLRKQMAVKKYLSIL 27

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[illegible]

Qy	1	HS	DA	VF	TQ	NY	TR	LK	QMA	VK	YL	NS	IL	N	28
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			:	:					:	:		:	:	:	
Db	25	HAD	GV	FT	SDF	SK	LG	QLS	AK	YL	ES	LM	D	52	

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RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match      52.1%   Score 74;   DB 7;   Length 27;
Best Local Similarity 44.4%;   Pred. No. 2.8e-05;
Matches 12;   Conservative 9;   Mismatches 6;   Indels 0;   Gaps 0;

Qy      1  HSDAVFTKNYTRLEKQMAVKKYLSIL 27
| | | | | : : : : : | : : | : | :
| | | | | : : : : : | : : | : | :
| | | | | : : : : : | : : | : | :

Db      1  HADGVFTSDFSKLGLQSAKKYLESLM 27
| | | | | : : : : : | : : | : | :
| | | | | : : : : : | : : | : | :
| | | | | : : : : : | : : | : | :

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Search completed: January 25, 2006, 15:31:42
Job time : 3.5 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR 80.*
1: pir1.*
2: pir2.*
3: pir3.*
4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	136	95.8	28	B60071	vasoactive intesti
2	136	95.8	28	A60304	vasoactive intesti
3	136	95.8	55	VRBO	vasoactive intesti
4	136	95.8	55	VRRE	vasoactive intesti
5	136	95.8	55	VRSH	vasoactive intesti
6	136	95.8	58	VRPG	vasoactive intesti
7	136	95.8	145	A60038	vasoactive intesti
8	136	95.8	170	VRHU	vasoactive intesti
9	136	95.8	170	VRRT	vasoactive intesti
10	136	95.8	170	A60037	vasoactive intesti
11	123	86.6	55	VRGP	vasoactive intesti
12	121	85.2	165	1 VRCH	vasoactive intesti
13	120	84.5	28	A60303	vasoactive intesti
14	113	79.6	28	A38232	vasoactive intesti
15	110	77.5	25	JQ0361	vasoactive intesti
16	99	69.7	27	A61071	vasoactive intesti
17	99	69.7	38	A49165	pituitary adenylat
18	99	69.7	173	S34767	pituitary adenylat
19	99	69.7	175	A37786	pituitary adenylat
20	99	69.7	176	I84638	pituitary adenylat
21	99	69.7	176	A34044	pituitary adenylat
22	99	69.7	195	I50456	pituitary adenylat
23	93	65.5	38	A61070	pituitary adenylat
24	83	58.5	35	HWGHD	exendin-2 - Gila m
25	80	56.3	31	HWGHS	exendin-1 - Mexica
26	71	50.0	104	A32731	somatoliberin prec
27	70	49.3	103	A41410	somatoliberin prec
28	63	44.4	27	SECH	secretin - chicken
29	63	44.4	44	1 RHBO5	somatoliberin - bo

30 58 40.8 44 1 RHFG
31 58 40.8 108 1 RHUS
32 57 40.1 443 2 C70392
33 56 39.4 206 2 I51301
34 55.5 39.1 266 2 E71612
35 54 38.0 556 2 D88700
36 52 36.6 27 2 A27267
37 52 36.6 276 2 AD1860
38 51 35.9 418 2 A97300
39 50 35.2 27 1 S07443
40 50 35.2 27 1 SEBO
41 50 35.2 27 1 SESH
42 50 35.2 131 1 SEPG
43 50 35.2 168 2 F90095
44 50 35.2 194 2 T27608
45 50 35.2 194 2 T29172

somatoliberin - pi
somatoliberin prec
gamma-glutamyl pho
proglucagon - chic
ribosomal protein
protein K02B2.4 [i
secretin - dog
two-component resp
gamma-glutamyl pho
secretin - human
secretin - bovine
secretin - sheep
secretin precursor
hypothetical prote
hypothetical prote
hypothetical prote

ALIGNMENTS

RESULT 1

B60071
vasoactive intestinal peptide - rhesus macaque
C:Species: Macaca mulatta (rhesus macaque)
C>Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998
C:Accession: B60071
R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.
Regul. Pept. 32, 39-45, 1991
A>Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.
A:Reference number: A60071; MUID:91164506; PMID:2003150
A:Accession: B60071
A:Status: protein sequence not shown
A:Molecule type: protein
A:Residues: 1-28 <YUA>
A:Cross-references: UNIPARC:UPI0000002D1C0
A>Note: the sequence is identical with the human sequence
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 2

A60304
vasoactive intestinal peptide - dog
N:Alternate names: VIP
C:Species: Canis lupus familiaris (dog)
C>Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004
C:Accession: A60304
R:Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.
Regul. Pept. Suppl. 3, S14, 1985
A>Title: Purification and sequencing of dog and guinea pig VIP's.
A:Reference number: A60304
A:Accession: A60304
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P04565; UNIPARC:UPI0000002D1C0
C:Superfamily: glucagon
C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 136; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||

Wed Feb 8 17:49:04 2006

Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 3

VRPB

N/Contains: vasoactive intestinal peptide precursor - bovine (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Bos primigenius taurus (cattle)
C/Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
C/Accession: A61643; A61644; S09689
R/Carlquist, M.; Kaiser, R.; Tatamoto, K.; Joernvall, H.; Mutt, V.
Eur. J. Biochem. 144, 243-247, 1984
A/Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
A/Reference number: A61643; MUID:85027215; PMID:6548446
A/Accession: A61643
A/Molecule type: protein
A/Residues: 1-27 <CAR>
A/Cross-references: UNIPARC:UPI0000173515
R/Carlquist, M.; Mutt, V.; Joernvall, H.
FEBS Lett. 108, 457-460, 1979
A/Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
A/Reference number: A61644; MUID:80092152; PMID:520589
A/Accession: A61644
A/Molecule type: protein
A/Residues: 28-55 <CA2>
A/Cross-references: UNIPARC:UPI000002D1C0
R/Bucail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht, J.
Biochim. Biophys. Acta 1038, 355-359, 1990
A/Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: S09688; MUID:90254163; PMID:2340294
A/Contents: annotation; comparison of mammalian PHI sequences
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F/1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F/28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F/27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F/55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 136; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 7.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55

RESULT 4

VRPB

N/Contains: vasoactive intestinal peptide precursor - rabbit (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Oryctolagus cuniculus (domestic rabbit)
C/Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
C/Accession: B60415; A60415
R/Gossens, D.; Bucail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht, J.
Peptides 11, 123-128, 1990
A/Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
A/Reference number: A60415; MUID:90259845; PMID:2342988
A/Accession: B60415
A/Molecule type: protein
A/Residues: 1-27 <GOS>
A/Cross-references: UNIPARC:UPI00000351DB
A/Accession: A60415
A/Molecule type: protein
A/Residues: 28-55 <GOS>
A/Cross-references: UNIPARC:UPI00000351DB
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
F/1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F/28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F/27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F/55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 136; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 7.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55

RESULT 5

VRPB

N/Contains: vasoactive intestinal peptide precursor - sheep (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C/Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C/Accession: B60072; A60072; C61063; A43974
R/Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A/Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: A60072; MUID:91239834; PMID:2034821
A/Accession: B60072
A/Molecule type: protein
A/Residues: 1-27 <BOU>
A/Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
A/Accession: A60072
A/Molecule type: protein
A/Residues: 28-55 <BO2>
A/Cross-references: UNIPARC:UPI000002D1C0
R/Miyata, A.; Jiang, L.; Stubbbs, H.H.; Arimura, A.
Regul. Pept. 38, 145-154, 1992
A/Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreacti
A/Reference number: A61063; MUID:92245116; PMID:1574609
A/Accession: C61063
A/Molecule type: protein
A/Residues: 28-55 <MIY>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: hypothalamus, intestine
R/Gafvelin, G.
Peptides 11, 703-706, 1990
A/Title: Isolation and primary structure of VIP from sheep brain.
A/Reference number: A43974; MUID:91045331; PMID:2235680
A/Accession: A43974
A/Molecule type: protein
A/Residues: 28-55 <GAF>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: brain
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;
F/1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
F/28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F/27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F/55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 136; DB 1; Length 55;
Best Local Similarity 96.4%; Pred. No. 7.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNTYTLRKQMAVKKYLNSILN 28
Db 28 HSDAVFTDNTYTLRKQMAVKKYLNSILN 55

RESULT 6

VRPB

N/Contains: vasoactive intestinal peptide precursor - pig (fragments)
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Sus scrofa domestica (domestic pig)
C/Date: 24-Apr-1994 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
C/Accession: A01549; A60300; A01550; J00417; A56754; S09690
R/Tatamoto, K.; Mutt, V.
Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
A/Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
A/Reference number: A01549; MUID:82082498; PMID:6947244

A:Accession: A01549
A:Molecule type: protein
A:Residues: 1-27 <TAT>
A:Cross-references: UNIPROT:P01284; UNIPARC:UPI000003510B
R:Tatamoto, K.

Regul. Pept. 6, 330, 1983
A:Title: PHI - a new brain-gut peptide.

A:Reference number: A60300

A:Accession: A60300

A:Molecule type: protein

A:Residues: 1-27 <TA2>

A:Cross-references: UNIPARC:UPI000003510B

R:Mutt, V.; Said, S.I.

Eur. J. Biochem. 42, 581-589, 1974

A:Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
Peptides 9, 469-474, 1988

A:Reference number: A01550; MUID:74167323; PMID:4829446

A:Accession: A01550

A:Molecule type: protein

A:Residues: 28-55 <MUT>

A:Cross-references: UNIPARC:UPI000002D1C0

R:Gafvelin, G.; Andersson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.

Peptides 9, 469-474, 1988

A:Title: Isolation and characterization of a variant form of vasoactive intestinal poly
A:Reference number: JT0417; MUID:88335763; PMID:2843830

A:Accession: JT0417

A:Molecule type: protein

A:Residues: 28-58 <GAF>

A:Cross-references: UNIPARC:UPI000002B99A

A:Note: this extended form is active in a VIP assay but is probably an incompletely pro
R:Podansky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.

J. Am. Chem. Soc. 96, 4973-4978, 1974

A:Reference number: A26231; MUID:74308014; PMID:4854585

A:Contents: annotation

A:Note: a 28-residue peptide having the sequence and biological activities (in two assay
R:Ichiki, Y.; Kitamura, K.; Kangawa, K.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992

A:Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A:Reference number: A56754; MUID:93038640; PMID:1329741

A:Accession: A56754

A:Molecule type: protein

A:Residues: 1-24 <ICH>

A:Cross-references: UNIPARC:UPI0000173514

A:Experimental source: duodenum

A:Note: sequence extracted from NCBI backbone (NCBIP:114219)

R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Robberecht,

Biochim. Biophys. Acta 1038, 355-359, 1990

A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294

A:Contents: annotation

A:Comment: the biological source of vasoactive intestine peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; neuropeptide

F1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F:55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly

Query Match 95.8%; Score 136; DB 1; Length 58;

Best Local Similarity 96.4%; Pred. No. 7.8e-13;

Matches 27; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

||||| ||||| ||||| ||||| |||||

DB 28 HSDAVFTDNYTLRKQMAVKYLSILN 55

RESULT 7

A60038

vasoactive intestinal peptide precursor - crab-eating macaque (fragment)

C:Species: Macaca fascicularis (crab-eating macaque)

C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004

C:Accession: A60038

R:Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A:Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar
A:Reference number: A60038; MUID:91203476; PMID:1850073

A:Accession: A60038

A>Status: not compared with conceptual translation

A:Molecule type: mRNA

A:Residues: 1-145 <BEN>

A:Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil

Query Match 95.8%; Score 136; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 2e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

||||| ||||| ||||| ||||| |||||

DB 100 HSDAVFTDNYTLRKQMAVKYLSILN 127

RESULT 8

VPHU

vasoactive intestinal peptide precursor [validated] - human

N:Alternate names: VIP precursor

N:Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vas

C:Species: Homo sapiens (man)

C:Date: 14-Nov-1983 #sequence revision 14-Nov-1983 #text change 09-Jul-2004

C:Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A015

R:Tsukada, T.; Horovitch, S.; Montminy, M.R.; Mandel, G.; Goodman, R.H.

DNA 4, 293-300, 1985

A:Title: Structure of the human vasoactive intestinal polypeptide gene.

A:Reference number: A30952; MUID:86004065; PMID:3899557

A:Accession: A23296

A:Molecule type: DNA

A:Residues: 1-170 <TSU>

A:Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:9340243; PIDN:J

A:Note: the authors translated the codon GAA for residue 48 as Gln

R:Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983

A:Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pepti

A:Reference number: A93313; MUID:83271523; PMID:6571696

A:Accession: A93313

A:Molecule type: mRNA

A:Residues: 1-170 <ITO>

A:Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:9340277; PIDN:AAA612

R:Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1138-1141, 1987

A:Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at

A:Reference number: A60205; MUID:87140054; PMID:2434617

A:Accession: A60205

A:Molecule type: mRNA

A:Residues: 78-155 <GOZ>

A:Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:9340250; PIDN:AAA612

A:Note: this abundant mRNA from a human buccal tumor line contains an unspecified intron

R:Linde, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A:Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A:Reference number: A26361; MUID:87092456; PMID:3025882

A:Accession: A26361

A:Molecule type: DNA

A:Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A:Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:9340271; PIDN:AAA61288.1; PID:9

A:Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1

R:Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A:Title: Isolation, characterization, and pharmacological actions of peptide histidine va

A:Reference number: A27419; MUID:88007645; PMID:3654650

A:Accession: A27419

A:Molecule type: protein

A:Residues: 81-122 <YIA>

A:Cross-references: UNIPARC:UPI00000351DE

R:Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochim. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a P
A/Reference number: JH0618; MUID:92287083; PMID:1318039
A/Accession: JH0618
A/Molecule type: protein
A/Residues: 125-152 <KIT>
A/Cross-references: UNIPARC:UPI000002D1C0
A/Experimental source: pheochromocytoma
R.Yanagani, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A/Reference number: I51955; MUID:188267775; PMID:2833091
A/Accession: I51955
A/Status: translated from GB/EMBL/DBDJ
A/Molecule type: DNA
A/Residues: 1-170 <RES>
A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
R.Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A/Reference number: I56494
A/Accession: I56494
A/Status: preliminary; translated from GB/EMBL/DBDJ
A/Molecule type: DNA
A/Residues: 78-155 <RE2>
A/Cross-references: UNIPARC:UPI000016B2P8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
R.Bloom, S.R.; Christofides, N.D.; Delamarier, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhea in vipoma patients associated with cosecretion of a second active pep
A/Reference number: I56988; MUID:84066682; PMID:6139527
A/Accession: I56988
A/Status: preliminary; translated from GB/EMBL/DBDJ
A/Molecule type: mRNA
A/Residues: 50-170 <RE3>
A/Cross-references: UNIPARC:UPI000016B2P7; GB:M54930; NID:G340247; PIDN:AAAG3268.1; PID:
C/Genetics:
A/Gene: GDB:VIP
A/Cross-references: GDB:I20490; OMIM:192320
A/Map position: 6q26-6q27
A/Introns: 36/2; 77/2; 112/2; 156/2
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuro
F;1-20/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTLRKQMAVKYKLSILN 28
Db 125 HSDAVFTDNTYLRKQMAVKYKLSILN 152
RESULT 9
VRR1
vasoactive intestinal peptide precursor - rat
N/Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C/Species: Rattus norvegicus (Norway rat)
C/Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
C/Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R.Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A/Reference number: A60053; MUID:90244869; PMID:2159586
A/Accession: A60053
A/Molecule type: DNA
A/Residues: 1-170 <GIL>

A/Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A/Note: the authors translated the codon GAG for residue 67 as Gln
R.Lamperti, S.D.; Rozen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A/Reference number: A60037; MUID:91232388; PMID:1851524
A/Accession: B60037
A/Status: not compared with conceptual translation
A/Molecule type: DNA
A/Residues: 78-155 <LAM>
A/Cross-references: UNIPARC:UPI0000173511
R.Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A/Reference number: A01548; MUID:85154612; PMID:3838518
A/Accession: A01548
A/Molecule type: mRNA
A/Residues: 9-170 <NIS>
A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G:
A/Experimental source: cerebral cortex
R.Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A/Reference number: A28102; MUID:89243784; PMID:3379062
A/Accession: A28102
A/Molecule type: protein
A/Residues: 134-152 <GOE>
A/Cross-references: UNIPARC:UPI00000351E4
A/Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R.Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Christ
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucinamide (PHI) - (1-27)-Gly as a new major form of PHI in
A/Reference number: A60586; MUID:89338237; PMID:2759027
A/Accession: A60586
A/Molecule type: protein
A/Residues: 81-108 <CAU>
A/Cross-references: UNIPARC:UPI0000173512
R.Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucinam
A/Reference number: A60587; MUID:90005222; PMID:2792003
A/Accession: A60587
A/Molecule type: protein
A/Residues: 81-122 <CA2>
A/Cross-references: UNIPARC:UPI0000173513
R.Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A/Reference number: S09688; MUID:90254163; PMID:2340294
A/Contents: annotation; comparison of mammalian PHI sequences
C/Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C/Genetics:
A/Introns: 36/2; 77/2; 156/2
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27-Gly #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl)
F;133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl)
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTLRKQMAVKYKLSILN 28
Db 125 HSDAVFTDNTYLRKQMAVKYKLSILN 152

RESULT 10

A60037

vasoactive intestinal peptide precursor - mouse

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Mus musculus (house mouse)

C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004

C;Accession: A60037; I49386

R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.

Brain Res. Mol. Brain Res. 9, 217-231, 1991

A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide

A;Reference number: A60037; MUID:91232388; PMID:1851524

A;Accession: A60037

A;Status: not compared with conceptual translation

A;Molecule type: DNA

A;Residues: 1-170 <LAM>

A;Cross-references: UNIPROT:P32648; UNIPARC:UPI0000002171F

R;Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.

DNA Seq. 5, 25-29, 1994

A;Title: High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide precursor

A;Reference number: I49386; MUID:95201289; PMID:7894056

A;Accession: I49386

A;Status: preliminary; translated from GB/EMBL/DBJ

A;Molecule type: DNA

A;Residues: 1-35 <RES>

A;Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:g895871; PIDN:CAA52350.1; PT

C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired

C;Genetics:

A;Gene: VIP

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;

F;1-21/Domain: signal sequence #status predicted <Sig>

F;81-107/Product: PHI-27 #status predicted <PHI>

F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>

F;107/Modified site: amidated carboxyl end (ile) (amide in mature form from following gl

F;133/Binding site: carboxylate (asn) (covalent) #status predicted

F;132/Modified site: amidated carboxyl end (asn) (amide in mature form from following gl

Query Match 95.8%; Score 136; DB 2; Length 170;

Best Local Similarity 96.4%; Pred. No. 2.4e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNVTLRKQMAVKKYLNSILN 28

Db 125 HSDAVFTDNTLRKQMAVKKYLNSILN 152

RESULT 11

VRGP

vasoactive intestinal peptide precursor - guinea pig (fragments)

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)

C;Species: Cavia porcellus (guinea pig)

C;Date: 31-Mar-1998 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004

C;Accession: A261175; S09688; A57082; B60304

R;Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.

Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985

A;Title: Guinea pig has a unique mammalian VIP.

A;Reference number: A261175; MUID:85225523; PMID:4004849

A;Accession: A26175

A;Molecule type: protein

A;Residues: 28-55 <DUB>

A;Cross-references: UNIPROT:P04566; UNIPARC:UPI00000351E2

R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gosse, D.; de Neef, P.; Rathe, J.; Robberecht,

Biochim. Biophys. Acta 1038, 355-359, 1990

A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide

A;Reference number: S09688; MUID:90254163; PMID:2340294

A;Accession: S09688

A;Molecule type: protein

A;Residues: 1-27 <BUS>

A;Cross-references: UNIPARC:UPI0000173516

A;Accession: A57082

A;Molecule type: protein

A;Residues: 28-55 <BU2>

A;Cross-references: UNIPARC:UPI0000173516

A;Molecule type: protein
A;Residues: 1-28 <DIM>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A;Note: This reference is an abstract
R;Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI000017662D
R;Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A;Reference number: S07432
A;Accession: S07432
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <DI3>
A;Cross-references: UNIPARC:UPI000013884B
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 84.5%; Score 120; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 7.6e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSIL 27
||||| :|:|||||:|:|
Db 1 HSDAVFTDYSIRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N;Alternate names: VIP
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C;Accession: A38232
R;Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A;Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A;Reference number: A38232; MUID:92179271; PMID:11542675
A;Accession: A38232
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A;Note: sequence extracted from NCBI backbone (NCBIP:87215)
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 79.6%; Score 113; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 7.9e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
||||| :|:|||||:|:|
Db 1 HSDAVFTDYSIRKQMAVKKYLNSLLN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C;Accession: JQ0361
R;Thwaites, D.I.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A;Title: Isolation and characterisation of two teleost VIP's.
A;Reference number: JQ0361

A;Accession: JQ0361
A;Molecule type: protein
A;Residues: 1-25 <THW>
A;Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide
Query Match 77.5%; Score 110; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 1.9e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTRLRKQMAVKKYLNS 25
||||| :|:|||||:|:|
Db 1 HSDAVFTDYSIRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 14.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-3
Perfect score: 142
Sequence: 1 HSDAVFTKNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Uniprot_05.80.*
1: uniprot_sprot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	136	95.8	28	1 VIP_CANFA	P63289 canis famil
2	136	95.8	28	1 VIP_CAPHI	P63290 capra hircu
3	136	95.8	28	1 VIP_MACMU	P84488 macaca mula
4	136	95.8	28	1 VIP_SHEEP	P63291 ovis aries
5	136	95.8	72	1 VIP_PIG	P01284 sus scrofa
6	136	95.8	72	1 VIP_RABIT	P32849 oryctolagus
7	136	95.8	118	2 QSTCY7_HUMAN	Q5tcy7 homo sapien
8	136	95.8	145	2 Q7MZY9_MACFA	Q7mzy9 macaca fasc
9	136	95.8	153	2 Q7TSR4_MURI	Q7tsr4 arvicanthi
10	136	95.8	169	2 Q5TCY8_HUMAN	Q5tcy8 homo sapien
11	136	95.8	170	1 VIP_BOVIN	P81401 bos taurus
12	136	95.8	170	1 VIP_HUMAN	P01282 homo sapien
13	136	95.8	170	1 VIP_MOUSE	P32648 mus musculu
14	136	95.8	170	1 VIP_RAT	P01283 rattus norv
15	136	95.8	170	2 Q5TCY9_HUMAN	Q5tcy9 homo sapien
16	136	95.8	171	2 Q9D2T7_MOUSE	Q9d2t7 mus musculu
17	123	86.6	72	1 VIP_CAVPO	P04566 cavia porce
18	121	85.2	28	1 VIP_ALAMI	P48142 alligator m
19	121	85.2	28	1 VIP_RANRI	P81016 rana ridibu
20	121	85.2	70	2 Q4TX3_ANAPL	Q4tx3 anas platyr
21	121	85.2	86	2 Q4TY9_9AVES	Q4ty9 anser anser
22	121	85.2	200	1 VIP_CHICK	P48143 gallus gall
23	121	85.2	200	1 VIP_MEIGA	P45644 meleagris g
24	121	85.2	202	2 Q7ZTG8_XENLA	Q7ztg8 xenopus lae
25	120	84.5	28	1 VIP_SCYCA	P09685 scyllorhinu
26	120	84.5	28	2 Q9PR19_AMICA	Q9pr19 amia calva
27	120	84.5	147	2 Q4SQN2_TETNG	Q4sqn2 tetraodon n
28	116	81.7	28	2 Q9PRN8_CARAU	Q9prn8 carassius a
29	113	79.6	28	1 VIP_DIDWA	P39089 didelphis m
30	110	77.5	25	1 VIP_GADMO	P09684 gadus morhu
31	103	72.5	38	2 Q75W85_MISAN	Q75w85 misgurnus a

32	100	70.4	172	2 Q9DE29_BRARE	Q9de29 brachydanio
33	100	70.4	199	2 Q5XJ29_BRARE	Q5xj29 brachydanio
34	99	69.7	38	2 Q75W94_HALRO	Q75w94 halocynthia
35	99	69.7	38	2 Q8IU36_PERAM	Q8iu36 periplaneta
36	99	69.7	38	2 Q8IU37_SRPLE	Q8iu37 sepioteuthi
37	99	69.7	38	2 Q8IU38_HYDMA	Q8iu38 hydra magni
38	99	69.7	38	2 Q8IU39_DUGJA	Q8iu39 dugesia jap
39	99	69.7	38	2 Q75W87_ONCMY	Q75w87 oncorhynch
40	99	69.7	38	2 Q75W90_9TELE	Q75w90 sardinops m
41	99	69.7	38	2 Q75W92_9PERC	Q75w92 stephanolep
42	99	69.7	38	2 Q8AYP4_ACISC	Q8ayp4 acipenser s
43	99	69.7	38	2 Q8AYP5_TRAJP	Q8ayp5 trachurus j
44	99	69.7	62	2 Q53BI2_9PRIM	Q53bi2 gorilla gor
45	99	69.7	62	2 Q53BI3_PONPY	Q53bi3 pongo pygma

ALIGNMENTS

RESULT 1
ID VIP_CANFA STANDARD; PRT; 28 AA.
AC P63289; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DE 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J., Du B.-H., Kaufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC removed.
CC -----
CC PIR; A60304; A60304.
CC HSSP; P18509; IGSA.
CC Ensembl; ENSCAFG0000000538; Canis familiaris.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 1.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUCA; 1.
CC PROSITE; PS00260; GLUCAGON; 1.
CC Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF13FB573FF6F3F CRC64;
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTKNYTLRKQMAVKYLSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKYLSILN 28


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RESULT 2
ID - VIP_CAPHI STANDARD; PRT; 28 AA.
P63290; P04565;
13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
DE Name=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
NCBI_TaxID=9925;
[1]
PROTEIN SEQUENCE.
MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
MOD_RES 28
FT ASparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;
Query Match 95.8%; Score 136; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNTLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | |
RESULT 3
ID - VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DE 13-SEP-2005 (Rel. 48, Created)
DE 13-SEP-2005 (Rel. 48, Last sequence update)
DE 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
DE Name=VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheciidae; Cercopithecinae; Macaca.
NCBI_TaxID=9544;
[1]
PROTEIN SEQUENCE.
MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;

```


RL Regul. Pept. 38:145-154(1992).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC removed.
 CC -----
 DR HIR; B60072; VRSH.
 DR HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 1.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUCA; 1.
 DR PROSITE; PS00260; GLUCAGON; 1.
 KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
 FT MOD RES 28 28
 FT SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;
 SQ
 Query Match 95.8%; Score 136; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.3e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

 RESULT 5
 VIP_PIG STANDARD; PRT; 72 AA.
 AC P01284; Q9TRN0;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 21-JUL-1986 (Rel. 01, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name=VIP;
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
 OC Sus.
 OX NCBI_TaxID=9823;
 RN [1]
 RP PROTEIN SEQUENCE OF 1-27.
 RX MEDLINE=82082498; PubMed=6947244;
 RA Tatamoto K., Mutt V.;
 RT "Isolation and characterization of the intestinal peptide porcine PHI
 RL (PHI-27), a new member of the glucagon-secretin family.";
 RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
 RP [2]
 RP PROTEIN SEQUENCE OF 1-24.
 RC TISSUE=Duodenum;
 RX MEDLINE=93038640; PubMed=1329741;
 RA Ichiki Y., Kitamura K., Kawamoto M., Matsuo H., Eto T.;
 RT "Organ distribution and characterization of porcine peptides (VIP,
 RL CGRP and PHI) that increase cAMP in rat platelets";
 RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
 RN [3]
 RP PROTEIN SEQUENCE OF 28-58.
 RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
 RA Gafvelin G., Andersson M., Dimaline R., Jörnvall H., Mutt V.;
 RT "Isolation and characterization of a variant form of vasoactive
 RL intestinal polypeptide";
 RL Peptides 9:469-474(1988).
 RN [4]
 RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
 RA Mutt V., Said S.I.;
 RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
 RT amino-acid sequence. Use of kallikrein in its determination.";
 RL Eur. J. Biochem. 42:581-589(1974).
 RN [5]
 RP SYNTHESIS OF VIP.
 RX MEDLINE=74308014; PubMed=4854585;
 RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
 RT "Synthesis of the vasoactive intestinal peptide (VIP)";
 RL J. Am. Chem. Soc. 96:4973-4978(1974).
 CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycogenolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -!- FUNCTION: PHI also causes vasodilation.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 CC with the human precursor sequence.
 CC -!- SIMILARITY: Belongs to the glucagon family.
 CC -----
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 CC -----
 DR PIR; A01549; VRPG.
 DR HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone_2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 KW Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27 Intestinal peptide PHI-27.
 FT PEPTIDE 45 72 Vasoactive intestinal peptide.
 FT MOD RES 27 27 Isoleucine amide.
 FT MOD RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;
 Query Match 95.8%; Score 136; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTKNYTLRKQMAVKKYLNSILN 28
 DB 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72

 RESULT 6
 VIP_RABIT STANDARD; PRT; 72 AA.
 ID VIP_RABIT
 AC P32649;
 DT 01-OCT-1993 (Rel. 27, Created)
 DT 01-OCT-1993 (Rel. 27, Last sequence update)
 DT 13-SEP-2005 (Rel. 48, Last annotation update)
 DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
 DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
 DE (Vasoactive intestinal polypeptide)] (Fragment).
 GN Name=VIP;
 OS Oryctolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
 OC Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]
 RP PROTEIN SEQUENCE.
 RC TISSUE=Small intestine;
 RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
 RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
 RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

RT "Amino acid sequence of VIP, PHI and secretin from the rabbit small
RL intestine.";
CC Peptides 11:123-128(1990).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC removed.
CC
CC HSSP; P18509; IGEA.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone 2; 2.
CC PRINTS; PR00275; GLUCAGON.
CC PROSITE; PS00260; GLUCAGON; 2.
CC Amidation; Cleavage on pair of basic residues;
CC Direct protein sequencing; Glucagon family; Hormone.
CC PEPTIDE 1 27
CC PEPTIDE 45 27
CC MOD_RES 27 72
CC MOD_RES 72 72
CC NON_TER 1 1
CC NON_TER 72 72
CC SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;
Query Match 95.8%; Score 136; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 3.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 45 HSDAVFTDNTYRLRKQMAVKKYLNSILN 72
RESULT 7
QSTCY7 HUMAN PRELIMINARY; PRT; 118 AA.
AC Q5TCY7;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide (Fragment).
GN Name=VIP; ORFNames=RP4-546K19.1-003;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN NUCLEOTIDE SEQUENCE.
RP Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21766.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1 1
FT SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
Query Match 95.8%; Score 136; DB 2; Length 118;
Best Local Similarity 96.4%; Pred. No. 5.7e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 74 HSDAVFTDNTYRLRKQMAVKKYLNSILN 101
RESULT 8
Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
ID Q7M2Y9;
AC Q7M2Y9;
DT 01-MAR-2004 (TrEMBLrel. 26, Created)
DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Vasoactive intestinal peptide precursor (Fragment).
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopithecinae; Macaca.
OX NCBI_TaxID=9541;
RN NUCLEOTIDE SEQUENCE.
RP MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
RX Benson D.L., Isackson P.J., Jones E.G.;
RT "In situ hybridization reveals VIP precursor mRNA-containing neurons
RT in monkey and rat neocortex."
RL Brain Res. Mol. Brain Res. 9:169-174(1991).
DR PIR; A60038; A60038.
DR HSSP; P18509; IGEA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1 1
FT NON_TER 145 145
FT SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;
Query Match 95.8%; Score 136; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 7.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTKNTYRLRKQMAVKKYLNSILN 28
Db 100 HSDAVFTDNTYRLRKQMAVKKYLNSILN 127
RESULT 9
Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
ID Q7TSR4;
AC Q7TSR4;
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Vasoactive intestinal polypeptide (Fragment).
OS Arvicanthus ansorgei.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Arvicanthis.
OX NCBI_TaxID=204747;
RN NUCLEOTIDE SEQUENCE.
RP Dardente H., Menet J.S., Tournier B.B., Challet E., Pevet P.,
RA Maasson-Pevet M.;
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY225375; AAP15167.1; -; mRNA.
DR HSSP; P18509; IGEA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.

```

DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match
Best Local Similarity 95.8%; Score 136; DB 2; Length 153;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTRLRKQMAVKYLSILN 135

RESULT 10
QSTCY8 HUMAN
ID QSTCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC QSTCY8
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

Query Match
Best Local Similarity 95.8%; Score 136; DB 2; Length 169;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTRLRKQMAVKYLSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE-22092342; PubMed-12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duoenum;

RX MEDLINE-85027215; PubMed-6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family.";
RT Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE-80092152; PubMed-520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RT FEBS Lett. 108:457-460(1979).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
CC -----
DR EMBL; AF503910; AAM28152.1; -; mRNA.
DR HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
FT SIGNAL 1 25
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107
FT PROPEP 111 122
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match
Best Local Similarity 95.8%; Score 136; DB 1; Length 170;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTRLRKQMAVKYLSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-42; intestinal peptide PHM-27 (Peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=83271523; PubMed=6571696;
 RA Itoh N., Obata K.-I., Yanaihara N., Okamoto H.;
 RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
 RT 27-like peptide, PHM-27.";
 RL Nature 304:547-549 (1983).
 RN [2]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=88267775; PubMed=2839091;
 RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
 RA Yanaihara N., Yamamoto H., Okamoto H.;
 RT "Complete nucleotide sequence of human vasoactive intestinal
 RT peptide/PHM-27 gene and its inducible promoter.";
 RL Ann. N. Y. Acad. Sci. 527:87-102 (1988).
 RN [3]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86004065; PubMed=3899557;
 RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
 RT "Structure of the human vasoactive intestinal polypeptide gene.";
 RL DNA 4:293-300 (1985).
 RN [4]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=87092456; PubMed=3025882;
 RA Lindar S., Barkhem T., Norberg A., Persson H., Schalling M.,
 RA Hoekfelt T., Magnusson G.;
 RT "Structure and expression of the gene encoding the vasoactive
 RT intestinal peptide precursor.";
 RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609 (1987).
 RN [5]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
 RA Delamarier J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
 RT "Vasoactive intestinal peptide: expression of the prohormone in
 RT bacterial cells.";
 RL Peptides 6:95-102 (1985).
 RN [6]
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
 RC TISSUE=Prostate;
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Udwin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
 RA Bosak S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.D., Hulyk S.W.,
 RA Villalón D.K., Munz D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettaman M., Madan A., Rodrigues S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallos D.E.,
 RA Schnerch A., Schein J.E., Jones S.U.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length human
 RT and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
 RN [7]
 RP NUCLEOTIDE SEQUENCE OF 8-170.
 RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
 RA Gozes I., Bodener M., Shani Y., Fridkin M.;
 RT "Structure and expression of the vasoactive intestinal peptide (VIP)
 RT gene in a human tumor.";
 RL Peptides 7:1-6 (1986).
 RN [8]
 RP NUCLEOTIDE SEQUENCE OF 50-170.
 RC TISSUE=Pancratic carcinoma;
 RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
 RA Bloom S.R., Delamarier J.F., Kawashima E., Christofides N.D.,
 RA Buell G., Polak J.M.;
 RT "Diarrhoea in vipoma patients associated with cosecretion of a second
 RT active peptide (peptide histidine isoleucine) explained by single
 RL coding gene.";
 RL Lancet 2:1163-1165 (1983).
 RN [9]
 RP NUCLEOTIDE SEQUENCE OF 78-155.
 RX MEDLINE=87140054; PubMed=2434617;
 RA Gozes I., Giladi E., Shani Y.;
 RT "Vasoactive intestinal peptide gene: putative mechanism of information
 RT storage at the RNA level.";
 RL J. Neurochem. 47:1136-1141 (1987).
 RN [10]
 RP PROTEIN SEQUENCE OF 81-122.
 RX MEDLINE=88007645; PubMed=3654650;
 RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
 RA Bloom S.R.;
 RT "Isolation, characterization, and pharmacological actions of peptide
 RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
 RT derived peptide.";
 RL J. Biol. Chem. 262:14010-14013 (1987).
 RN [11]
 RP PROTEIN SEQUENCE OF 127-152.
 RC TISSUE=Phaeochromocytoma;
 RX MEDLINE=92287083; PubMed=1318039;
 RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
 RT "Isolation and characterization of peptides which act on rat
 RT platelets, from a pheochromocytoma.";
 RL Biochem. Biophys. Res. Commun. 185:134-141 (1992).
 RN [12]
 RP STRUCTURE BY NMR OF VIP.
 RX MEDLINE=9132343; PubMed=1863695;
 RA Theriault Y., Boulanger Y., St Pierre S.;
 RT "Structural determination of the vasoactive intestinal peptide by two-
 RT dimensional H-NMR spectroscopy.";
 RL Biopolymers 31:459-464 (1991).
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 CC stimulates myocardial contractility, increases glycolysis and
 CC relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -1- FUNCTION: PHM and PHV also cause vasodilation.
 CC -1- SIMILARITY: Belongs to the glucagon family.
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use as long as its content is in no way modified and this statement is not
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 DR EMBL; L00157; AAA61289.1; -; Genomic_DNA.
 DR EMBL; L00154; AAA61289.1; JOINED; Genomic_DNA.
 DR EMBL; L00155; AAA61289.1; JOINED; Genomic_DNA.
 DR EMBL; L00156; AAA61289.1; JOINED; Genomic_DNA.
 DR EMBL; M33027; AAA69515.1; -; Genomic_DNA.
 DR EMBL; M11553; AAA61284.1; -; Genomic_DNA.
 DR EMBL; M11549; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M11550; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M11551; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M11552; AAA61284.1; JOINED; Genomic_DNA.
 DR EMBL; M14623; AAA61288.1; -; Genomic_DNA.
 DR EMBL; M14619; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M14620; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M14621; AAA61288.1; JOINED; Genomic_DNA.
 DR EMBL; M14622; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36610; AAA61286.1; -; Genomic_DNA.
 DR EMBL; M36606; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36607; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36608; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; M36609; AAA61286.1; JOINED; Genomic_DNA.
 DR EMBL; SC009794; AAH09794.1; -; mRNA.
 DR EMBL; M36634; AAA61287.1; -; mRNA.

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M22162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InvDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
DR AMIDATION; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20
FT PROPEP 21 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CONFLICT 96 97
FT CONFLICT 113 113
FT CONFLICT 116 116
FT CONFLICT 136 136
FT CONFLICT 136 136
SQ SEQUENCE 170 AA; 19169 MW; 93EC0177F89508FD CRC64;

Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKYLSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
DE Name=Vip;
GN Mus musculus (Mouse).
OS Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

```

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RT "High conservation of upstream regulatory sequences on the human and
RT mouse vasoactive intestinal peptide (VIP) genes.";
RL DNA Seq. 5:25-29(1994).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
DR PIR; A60037; A60037.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSMUSG00000019772; Mus musculus.
DR MGI; MGI:98933; Vip.
DR GO; GO:0005615; C:extracellular space; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTKNYTRLRKQMAVKYLSILN 28
Db 125 HSDAVFTDNYTRLRKQMAVKYLSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
DE Name=Vip;
GN Rattus norvegicus (Rat).
OS Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

```

RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lampert E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
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removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VERT.
DR HSSP; P18509; IGEA.
DR Ensemble; ENSRNOG00000018908; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL. 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PEPTIDE 156 170
FT PROPEP 156 170
FT MOD_RES 107 107
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT CARBOHYD 133 133
FT CARBOHYD 133 133
FT N-linked (GLCNAC. . .) (Potential).
FT N-linked (GLCNAC. . .) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;
Query Match 95.8%; Score 136; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 152

RESULT 15
Q5TCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC Q5TCY9;
DT 01-FEB-2005 (TRENBLrel. 29, Created)
DT 01-FEB-2005 (TRENBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TRENBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 95.8%; Score 136; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 152
Search completed: January 25, 2006, 15:18:39
JOB time : 76 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21:*
1: Geneseqp1980s:*
2: Geneseqp1990s:*
3: Geneseqp2000s:*
4: Geneseqp2001s:*
5: Geneseqp2002s:*
6: Geneseqp2003as:*
7: Geneseqp2003bs:*
8: Geneseqp2004s:*
9: Geneseqp2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	142	100.0	28	5	Abg94141 Human vas
2	137	96.5	28	1	Aap10172 VIP. 3/20
3	137	96.5	28	1	Aap71039 Sequence
4	137	96.5	28	2	Aar34943 Porcine V
5	137	96.5	28	2	Aar40272 Native VI
6	137	96.5	28	2	Aar53111 Bronchodi
7	137	96.5	28	2	Aar53109 Bronchodi
8	137	96.5	28	2	Aar53110 Bronchodi
9	137	96.5	28	2	Aar87092 Vasoactiv
10	137	96.5	28	2	Aar83785 VIP. 2/19
11	137	96.5	28	2	Aar97810 Vasoactiv
12	137	96.5	28	2	Aar93023 Human glu
13	137	96.5	28	2	Aaw65188 Vasoactiv
14	137	96.5	28	2	Aaw06120 Human VIP
15	137	96.5	28	2	Aaw06119 Mouse VIP
16	137	96.5	28	2	Aaw06114 Rabbit VI
17	137	96.5	28	2	Aaw06113 Macaque V
18	137	96.5	28	2	Aaw06121 Pig VIP p
19	137	96.5	28	2	Aaw06122 Goat VIP
20	137	96.5	28	2	Aaw06115 Dog VIP p
21	137	96.5	28	2	Aaw06112 Sheep VIP
22	137	96.5	28	2	Aaw37791 Vasoactiv
23	137	96.5	28	2	Aaw71677 Vasoactiv
24	137	96.5	28	2	Aay30769 Vasoactiv

25	137	96.5	28	2	AAY44196 Human vas
26	137	96.5	28	3	AAY94560 Vasoactiv
27	137	96.5	28	4	AAB85707 Peptide h
28	137	96.5	28	4	AAB85710 Peptide h
29	137	96.5	28	4	AAB91279 Vasoactiv
30	137	96.5	28	4	AAB91278 Vasoactiv
31	137	96.5	28	4	AAB12028 Porcine v
32	137	96.5	28	4	AAB37111 Human vas
33	137	96.5	28	4	AAG70459 Vasoactiv
34	137	96.5	28	4	AAB50845 Human pro
35	137	96.5	28	4	AAB09653 Porcine i
36	137	96.5	28	4	AAB45614 Native va
37	137	96.5	28	5	AAB19604 Human sce
38	137	96.5	28	5	AAB19627 Human vas
39	137	96.5	28	5	AAB19603 Human vas
40	137	96.5	28	5	ABB06677 Mammalian
41	137	96.5	28	5	AAB06677 Modified
42	137	96.5	28	5	AAB06677 Tumour ap
43	137	96.5	28	5	ABG94140 Human vas
44	137	96.5	28	5	ABG94139 Human vas
45	137	96.5	28	5	ABG93952 Human vas

ALIGNMENTS

RESULT 1
ABG94141
ID ABG94141 standard; peptide; 28 AA.
XX
AC ABG94141;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human vasoactive intestinal polypeptide (VIP) analogue #189.
XX
KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX
OS Unidentified.
XX
PN US2002099003-A1.
XX
PD 25-JUL-2002.
XX
PF 13-AUG-2001; 2001US-00929818.
XX
PR 28-OCT-1997; 97US-00959057.
PR 28-OCT-1997; 97US-00959084.
PR 27-OCT-1998; 98US-00181316.
PR 04-FEB-2000; 2000US-00498522.
XX
PA (WILS/) WILSON L F.
PA (PLAC/) PLACE V A.
XX
PI Wilson LF, Place VA;
XX
DR WPI; 2002-697729/75.
XX
PT Treating sexual dysfunction in females comprises administering vasoactive
PT intestinal polypeptide or against to vagina and/or vulvar region.
XX
PS Claim 19; Page: 19pp; English.
XX
CC The invention relates to a method for treating sexual dysfunction in
CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;
 SQ Query Match 100.0%; Score 142; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 3.7e-11;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 2
 AAP10172
 ID AAP10172 standard; peptide; 28 AA.
 XX AAP10172;
 AC
 XX 25-MAR-2003 (revised)
 DT 21-DEC-1992 (first entry)
 XX
 DE VIP.
 XX Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.
 XX Homo sapiens.

XX JF56128721-A.
 XX 08-OCT-1981.
 XX 12-MAR-1980; 80JP-00030308.
 XX 12-MAR-1980; 80JP-00030308.
 XX (BISA) EISAI CO LTD.
 XX WPI; 1981-86052D/47.
 XX Antiallergic agent comprises peptide - contg. 28 amino acid units, is
 PT active against e.g. bronchial asthma and hay fever.

XX Claim 1; Page 1; 3pp; Japanese.
 XX The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)

XX Sequence 28 AA;
 SQ Query Match 96.5%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 3
 AAP71039
 ID AAP71039 standard; peptide; 28 AA.
 XX AAP71039;
 AC
 XX 03-OCT-2002 (revised)
 DT 05-APR-1991 (first entry)
 XX Sequence of active ingredient in hair growth promoting compen.

XX Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 KW hair growth promoter.

XX Synthetic.
 XX EP225639-A.
 XX 16-JUN-1987.

XX 10-DEC-1986; 86EP-00117190.
 XX 10-DEC-1985; 85JP-00276099.

XX (MEIJ) MEIJI SEIKA KAISHA.
 XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkaji T;
 PI WPI; 1987-164873/24.

XX Hair growth promoting compens. - contg. vasoactive intestinal polypeptide
 PT and carrier.
 XX Claim 1; Page 8; 10pp; English.

XX When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

SQ Sequence 28 AA;

Query Match 96.5%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 4
 AAR34943
 ID AAR34943 standard; peptide; 28 AA.

XX AAR34943;
 AC

XX 25-MAR-2003 (revised)
 DT 28-JUL-1993 (first entry)

XX Porcine VIP.

XX Vasoactive intestinal peptide; asthma; bronchodilation activity;
 KW bronchiotracheal constrictive disorders.

OS Sus scrofa.
 PN EP536741-A2.
 XX
 PD 14-APR-1993.
 XX
 PF 08-OCT-1992; 92EP-00117185.
 XX
 PR 11-OCT-1991; 91US-00773747.
 XX
 PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
 XX
 PI Bolin DR, Odonnell M;
 XX
 DR WPI; 1993-118996/15.
 XX
 PT New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
 PT the treatment of bronchotracheal constructive disorders e.g. asthma.
 XX
 PS Disclosure; Page 65; 141pp; English.
 XX
 CC The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)
 XX
 XX Sequence 28 AA;
 Query Match 96.5%; Score 137; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 5
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 XX
 AC AAR40272;
 XX
 DT 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 XX
 DE Native VIP.
 XX
 KW Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 KW side effect; bronchoconstrictive disorder; asthma.
 XX
 OS Sus scrofa.
 XX
 FH Key Location/Qualifiers
 FT Modified-site 28 /note= "C-terminal is amidated"
 FT
 XX US5234907-A.
 PN
 XX 10-AUG-1993.
 PD
 XX 24-APR-1991; 91US-00690300.
 PF
 PR 30-JUN-1989; 89US-00374503.
 XX
 XX (HOFF) HOFFMANN LA ROCHE INC.
 PA
 XX Bolin DR,
 PI
 XX

DR WPI; 1993-264645/33.
 XX
 PT New vasoactive intestinal peptide analogues - are potent bronchodilators
 PT without cardiovascular side effects, used for treating, e.g. asthma.
 XX
 PS Disclosure; Page 25-26; 66pp; English.
 XX
 CC VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
 CC formulae; AAR40279-364: examples). The VIP analogues are potent
 CC bronchodilators and have no cardiovascular side effects. They are used
 CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
 CC on 25-MAR-2003 to correct PF field.)
 XX
 XX Sequence 28 AA;
 Query Match 96.5%; Score 137; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 6
 AAR53111
 ID AAR53111 standard; peptide; 28 AA.
 XX
 AC AAR53111;
 XX
 DT 20-DEC-1994 (first entry)
 XX
 DE Bronchodilator peptide #21.
 XX
 KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.
 XX
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Misc-difference 10 /note= "D-form residue"
 FT Misc-difference 22 /note= "D-form residue"
 FT Modified-site 28 /note= "Amidated C-terminal"
 FT
 XX JP06092991-A.
 PN
 XX 05-APR-1994.
 PD
 XX 28-FEB-1991; 91JP-00034335.
 PF
 XX 28-FEB-1991; 91JP-00034335.
 PR
 XX (DAIL) DAICEL CHEM IND LTD.
 PA (MEIJ) MEIJI SEIKA KAISHA.
 XX
 DR WPI; 1994-147946/18.
 XX
 PT Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.
 XX
 PS Disclosure; Page 5; 29pp; Japanese.
 XX
 CC The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis
 XX

SQ	Sequence 28 AA;	
	Query Match 96.5%; Score 137; DB 2; Length 28;	
	Best Local Similarity 96.4%; Pred. No. 1.6e-10;	
	Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	
Qy	1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28	
Db	1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28	
RESULT 7		
AAR53109		
ID	AAR53109 standard; peptide; 28 AA.	
XX		
AC	AAR53109;	
XX		
DT	20-DEC-1994 (first entry)	
XX		
DE	Bronchodilator peptide #19.	
XX		
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;	
KW	selectively; toxicity; mammal; bronchodilator.	
XX		
OS	Synthetic.	
XX		
FH	Key Location/Qualifiers	
FT	Misc-difference 10 /note= "D-form residue"	
FT	Modified-site 28 /note= "Amidated C-terminal"	
FT		
XX		
PN	JP06092991-A.	
XX		
PD	05-APR-1994.	
XX		
PF	28-FEB-1991; 91JP-00034335.	
XX		
PR	28-FEB-1991; 91JP-00034335.	
XX		
PA	(DAIL) DAICEL CHEM IND LTD.	
PA	(MEIJ) MEIJI SEIKA KAISHA.	
XX		
DR	WPI; 1994-147946/18.	
XX		
PT	Active peptide(s), having smooth muscle relaxing activity - useful as	
PT	bronchodilators.	
XX		
PS	Disclosure; Page 5; 29pp; Japanese.	
XX		
CC	The sequences given in AAR53091-111 are synthetic peptides based on	
CC	vasoactive intestinal peptide (VIP) which have the activity of relaxing	
CC	the smooth muscle selectively and are only low toxic-non- toxic to	
CC	mammals. These peptides may be used as bronchodilators. They are prepared	
CC	by solid phase synthesis using a resin having an amino functional group	
CC	capable of bonding to the amino acid at the carboxy terminal through a	
CC	carboxyl group and fixing the peptide chain during the synthesis	
XX		
SQ	Sequence 28 AA;	
	Query Match 96.5%; Score 137; DB 2; Length 28;	
	Best Local Similarity 96.4%; Pred. No. 1.6e-10;	
	Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	
Qy	1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28	
Db	1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28	
RESULT 8		
AAR53110		
ID	AAR53110 standard; peptide; 28 AA.	
XX		

AC	AAR53110;	
XX		
DT	20-DEC-1994 (first entry)	
XX		
DE	Bronchodilator peptide #20.	
XX		
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;	
KW	selectively; toxicity; mammal; bronchodilator.	
XX		
OS	Synthetic.	
XX		
FH	Key Location/Qualifiers	
FT	Misc-difference 22 /note= "D-form residue"	
FT	Modified-site 28 /note= "Amidated C-terminal"	
FT		
XX		
PN	JP06092991-A.	
XX		
PD	05-APR-1994.	
XX		
PF	28-FEB-1991; 91JP-00034335.	
XX		
PR	28-FEB-1991; 91JP-00034335.	
XX		
PA	(DAIL) DAICEL CHEM IND LTD.	
PA	(MEIJ) MEIJI SEIKA KAISHA.	
XX		
DR	WPI; 1994-147946/18.	
XX		
PT	Active peptide(s), having smooth muscle relaxing activity - useful as	
PT	bronchodilators.	
XX		
PS	Disclosure; Page 5; 29pp; Japanese.	
XX		
CC	The sequences given in AAR53091-111 are synthetic peptides based on	
CC	vasoactive intestinal peptide (VIP) which have the activity of relaxing	
CC	the smooth muscle selectively and are only low toxic-non- toxic to	
CC	mammals. These peptides may be used as bronchodilators. They are prepared	
CC	by solid phase synthesis using a resin having an amino functional group	
CC	capable of bonding to the amino acid at the carboxy terminal through a	
CC	carboxyl group and fixing the peptide chain during the synthesis	
XX		
SQ	Sequence 28 AA;	
	Query Match 96.5%; Score 137; DB 2; Length 28;	
	Best Local Similarity 96.4%; Pred. No. 1.6e-10;	
	Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	
Qy	1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28	
Db	1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28	
RESULT 9		
AAR87092		
ID	AAR87092 standard; peptide; 28 AA.	
XX		
AC	AAR87092;	
XX		
DT	06-JUN-1996 (first entry)	
XX		
DE	Vasoactive intestinal peptide, forms part of gene transfer complex.	
XX		
KW	Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;	
KW	gene therapy; vaccine.	
XX		
OS	Sus scrofa.	
XX		
FH	Key Location/Qualifiers	
FT	Modified-site 28 /note= "amidated"	
FT		
XX		

FN	FR2719316-A1.
XX	
PD	03-NOV-1995.
PF	
XX	28-APR-1994; 94FR-00005174.
XX	
PR	28-APR-1994; 94FR-00005174.
XX	
PA	(IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX	
PI	Migoud P, Erbacher P, Roche-Degremont A, Monsigny M;
XX	
DR	WPI; 1995-375617/49.
XX	
PT	New nucleic acid complexes with cationic polymers - useful for genetic transformation of cells.
XX	
PS	Claim 11; Page 43; 58pp; French.
XX	
CC	In novel complexes of negatively-charged nucleic acids and positively-
CC	charged polymers, the polymers comprise monomer subunits bearing NH ₃ ⁺
CC	groups, at least 10% of which are replaced by uncharged amino groups
CC	bearing a substitut. that has at least one -OH group and is not recognised
CC	by cell-membrane receptors; the side-chain groups of the polymer (i.e.
CC	the NH ₃ ⁺ and/or OH groups) may be subst'd. by a group that is recognised
CC	by a cell membrane receptor, provided that at least 30% of the NH ₃ ⁺
CC	groups remain free. The complexes are useful for transfecting particular
CC	nucleic acid sequences into particular cell types, depending on the
CC	identity of the cell membrane receptor ligands involved, e.g. for gene
CC	therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
CC	antigens recognised by lectins, natural metabolites (such as biotin,
CC	tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
CC	intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
CC	peptide hormones such as alpha-MSH, chemotactic factors and integrin
CC	ligands)
XX	
SQ	Sequence 28 AA;
	Query Match 96.5%; Score 137; DB 2; Length 28;
	Best Local Similarity 96.4%; Pred. No. 1.6e-10;
	Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy	1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Dd	1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
RESULT 10	
AAR83785	
ID	AAR83785 standard; peptide; 28 AA.
XX	
AC	AAR83785;
XX	
DT	27-FEB-1996 (first entry)
XX	
DE	VIP.
XX	
KW	VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
KW	secretin; nervous system; digestive system; smooth muscle; relaxant;
KW	bronchial asthma; impotence; therapy.
XX	
OS	Sus scrofa.
XX	
FH	Key Location/Qualifiers
FT	Misc-difference 29
FT	/note= "amidated"
XX	
PN	EP663406-A1.
XX	
PD	19-JUL-1995.
XX	
PP	19-DEC-1994; 94EP-00120126.
XX	

PS	Claim 1; Page 2; 4pp; Japanese.
XX	Vasodilator intestinal peptide and related compounds are known to have
CC	strong vasodilatory activity. They have now been found to be effective in
CC	the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
CC	diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
CC	novel skin ulcer remedy
XX	
SSQ	Sequence 28 AA;
	Query Match 96.5%; Score 137; DB 2; Length 28;
	Best Local Similarity 96.4%; Pred. No. 1.6e-10;
Matches	27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db	1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 12	
AAR93023	AAR93023 standard; protein; 28 AA.
XX	XX
AAR93023;	AC AC
DT	09-AUG-1996 (first entry)
DE	Human glucagon degrading enzyme - VIP substrate.
XX	XX
KW	Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW	vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
KW	amplification; polymerase chain reaction; probe; expression vector;
KW	eukaryote; SV40 promoter; COS-7.
XX	XX
OS	Synthetic.
XX	XX
FH	Key Location/Qualifiers
FT	Cleavage-site 17..18
PT	Modified-site 28
FT	/note= "contains C-terminal amide group"
PN	JF08023972-A.
XX	XX
PD	30-JAN-1996.
XX	XX
PF	19-JUL-1994; 94JP-00187936.
XX	XX
PR	19-JUL-1994; 94JP-00187936.
XX	XX
PA	(SUNR) SUNTORY LTD.
XX	XX
DR	WPI; 1996-133414/14.
XX	XX
PT	New glucagon decomposing enzyme, and DNA encoding it - for specifically
FT	cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT	and treatment of diseases caused by excess glucagon and VIP.
XX	XX
PS	Claim 1; Page 2; 18pp; Japanese.
XX	A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC	isolated from a human pancreatic carcinoma cell line HPC-Yo CDNA library.
CC	The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
CC	cleavage of glucagon, vasoactive intestinal peptide and selectin
CC	(AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC	library with an anti-GDE peptide antibody, amplifying the inserts with
CC	the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC	This screening resulted in the full length clone designated lambda GDE4-
CC	2. The coding region of the clone was subsequently PCR amplified by the
CC	primers AAT11576-7 and inserted into the eukaryotic expression vector
CC	pKDCR under control of the SV40 promoter for production of the protein in
CC	COS-7 cells. The protein is useful in preventing and treating diseases
CC	characterised by an excess of glucagon or vasoactive intestinal peptide
XX	XX

AC AAW06120;
 XX 16-JUL-1997 (first entry)
 XX Human VIP peptide.
 DE Vasointestinal peptide; VIP; immunise; egg-laying bird; turkey;
 KW food-producing animal; egg production; feed utilisation.
 XX OS Homo sapiens.
 XX PN WO9634958-A1.
 XX PD 07-NOV-1996.
 XX PF 03-MAY-1996; 96WO-CA000280.
 XX PR 03-MAY-1995; 95US-00433108.
 XX PA (BIOS-) BIOSTAR INC.
 XX PI Cox GJ, Weeks-Levy C;
 XX DR WPI; 1996-506160/50.
 XX PT New recombinant vasoactive intestinal peptide(s) - used to immunise birds
 XX PT for increasing egg prodn. or animals for increasing food utilisation.
 XX PS Disclosure; Fig 1; 47pp; English.
 XX CC The sequences given in AAW06110-23 represent vasointestinal peptides
 CC (VIP's) from various species. These peptides, or fragments representing
 CC residues 1-10 (peptide V1), 7-16 (peptide V2), 13-22 (peptide V3) and 19-
 CC 28 (peptide V4) may be used for immunising egg-laying birds, pref.
 CC turkeys, or food-producing animals against VIP. The immunisation is
 CC useful for increasing egg prodn. in bird species and for increasing
 CC efficiency of feed utilisation and rate of gain in food producing animals
 XX SQ Sequence 28 AA;
 XX Query Match 96.5%; Score 137; DB 2; Length 28;
 XX Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 1 HSDAVFTQNTYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28
 Search completed: January 25, 2006, 15:08:20
 Job time : 77.875 secs

AC AAW06119
 XX 16-JUL-1997 (first entry)
 XX Mouse VIP peptide.
 DE Vasointestinal peptide; VIP; immunise; egg-laying bird; turkey;
 KW food-producing animal; egg production; feed utilisation.
 XX OS Mus musculus.
 XX PN WO9634958-A1.
 XX PD 07-NOV-1996.
 XX PF 03-MAY-1996; 96WO-CA000280.
 XX PR 03-MAY-1995; 95US-00433108.
 XX PA (BIOS-) BIOSTAR INC.

AC AAW06119 standard; peptide; 28 AA.
 XX AAW06119;
 XX 16-JUL-1997 (first entry)
 XX Mouse VIP peptide.
 DE Vasointestinal peptide; VIP; immunise; egg-laying bird; turkey;
 KW food-producing animal; egg production; feed utilisation.
 XX OS Mus musculus.
 XX PN WO9634958-A1.
 XX PD 07-NOV-1996.
 XX PF 03-MAY-1996; 96WO-CA000280.
 XX PR 03-MAY-1995; 95US-00433108.
 XX PA (BIOS-) BIOSTAR INC.

XX Cox GJ, Weeks-Levy C;
 XX WPI; 1996-506160/50.
 XX New recombinant vasoactive intestinal peptide(s) - used to immunise birds
 XX PT for increasing egg prodn. or animals for increasing food utilisation.
 XX PS Disclosure; Fig 1; 47pp; English.
 XX CC The sequences given in AAW06110-23 represent vasointestinal peptides
 CC (VIP's) from various species. These peptides, or fragments representing
 CC residues 1-10 (peptide V1), 7-16 (peptide V2), 13-22 (peptide V3) and 19-
 CC 28 (peptide V4) may be used for immunising egg-laying birds, pref.
 CC turkeys, or food-producing animals against VIP. The immunisation is
 CC useful for increasing egg prodn. in bird species and for increasing
 CC efficiency of feed utilisation and rate of gain in food producing animals
 XX SQ Sequence 28 AA;
 XX Query Match 96.5%; Score 137; DB 2; Length 28;
 XX Best Local Similarity 96.4%; Pred. No. 1.6e-10;
 XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 1 HSDAVFTQNTYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:20
 Job time : 77.875 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
1: /cgn2_6/prodata/1/iaa/5 COMB.pep.*
2: /cgn2_6/prodata/1/iaa/6 COMB.pep.*
3: /cgn2_6/prodata/1/iaa/H COMB.pep.*
4: /cgn2_6/prodata/1/iaa/PCTUS COMB.pep.*
5: /cgn2_6/prodata/1/iaa/RE COMB.pep.*
6: /cgn2_6/prodata/1/iaa/backfile91.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	142	100.0	28	US-09-528-200-4	Sequence 4, Appli
2	138	97.2	28	US-09-528-200-3	Sequence 3, Appli
3	138	97.2	28	US-09-528-200-5	Sequence 5, Appli
4	137	96.5	28	US-07-690-300B-1	Sequence 1, Appli
5	137	96.5	28	US-07-676-987A-1	Sequence 1, Appli
6	137	96.5	28	US-07-868-906-1	Sequence 1, Appli
7	137	96.5	28	US-08-201-092-1	Sequence 1, Appli
8	137	96.5	28	US-07-924-054-11	Sequence 11, Appli
9	137	96.5	28	US-08-343-082-1	Sequence 1, Appli
10	137	96.5	28	US-08-361-443-1	Sequence 1, Appli
11	137	96.5	28	US-08-288-681A-1	Sequence 1, Appli
12	137	96.5	28	US-07-776-272-26	Sequence 26, Appli
13	137	96.5	28	US-08-308-729-1	Sequence 1, Appli
14	137	96.5	28	US-08-062-472B-40	Sequence 40, Appli
15	137	96.5	28	US-08-171-701A-1	Sequence 1, Appli
16	137	96.5	28	US-08-741-678-1	Sequence 1, Appli
17	137	96.5	28	US-08-519-180-2	Sequence 2, Appli
18	137	96.5	28	US-08-414-424-1	Sequence 1, Appli
19	137	96.5	28	US-08-413-708B-1	Sequence 1, Appli
20	137	96.5	28	US-08-818-253-37	Sequence 37, Appli
21	137	96.5	28	US-08-897-624-1	Sequence 1, Appli
22	137	96.5	28	US-08-930-845-1	Sequence 1, Appli
23	137	96.5	28	US-08-952-568-3	Sequence 3, Appli
24	137	96.5	28	US-08-952-568-4	Sequence 4, Appli
25	137	96.5	28	US-08-952-568-5	Sequence 5, Appli
26	137	96.5	28	US-08-952-568-6	Sequence 6, Appli
27	137	96.5	28	US-08-952-568-10	Sequence 10, Appli

28	137	96.5	28	US-08-952-568-11	Sequence 11, Appli
29	137	96.5	28	US-08-952-568-12	Sequence 12, Appli
30	137	96.5	28	US-08-952-568-13	Sequence 13, Appli
31	137	96.5	28	US-09-192-048-21	Sequence 21, Appli
32	137	96.5	28	US-08-893-749-2	Sequence 2, Appli
33	137	96.5	28	US-08-818-252-37	Sequence 37, Appli
34	137	96.5	28	US-09-260-846-16	Sequence 16, Appli
35	137	96.5	28	US-08-842-322-31	Sequence 31, Appli
36	137	96.5	28	US-09-333-842-1	Sequence 1, Appli
37	137	96.5	28	US-09-446-352B-1	Sequence 1, Appli
38	137	96.5	28	US-09-316-919-53	Sequence 53, Appli
39	137	96.5	28	US-09-630-335-1	Sequence 1, Appli
40	137	96.5	28	US-09-629-632A-1	Sequence 1, Appli
41	137	96.5	28	US-09-528-200-196	Sequence 196, App
42	137	96.5	28	US-09-316-920A-53	Sequence 53, Appli
43	137	96.5	28	US-09-646-046-1	Sequence 1, Appli
44	137	96.5	28	US-09-285-422-1	Sequence 1, Appli
45	137	96.5	28	US-10-100-258B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-4

Query Match 100.0%; Score 142; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 2.2e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYLSILN 28
DB 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

RESULT 2
US-09-528-200-3
; Sequence 3, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN

Wed Feb 8 17:49:05 2006

```

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGEN, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-3

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LIGHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGEN, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-5

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match          96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY, W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D.C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS

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/ SOFTWARE: PatentIn Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/676,987A
/ FILING DATE: 19910329
/ CLASSIFICATION: 514
/ ATTORNEY/AGENT INFORMATION:
/ NAME: REPPER, GEORGE R.
/ REGISTRATION NUMBER: 31,414
/ REFERENCE/DOCKET NUMBER: 1783-101
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: (202) 783-6040
/ TELEFAX: (202) 783-6031
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 28 amino acids
/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match          96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 6
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki
; TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/868,906
; FILING DATE: 19920416
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 3-90671
; FILING DATE: 22-APR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: 920238N
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 659-2930
; TELEFAX: (202) 887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
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/ TYPE: AMINO ACID
/ TOPOLOGY: linear
/ MOLECULE TYPE: peptide
US-07-868-906-1

Query Match          96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 7
US-08-201-092-1
; Sequence 1, Application US/08201092
; Patent No. 5428015
; GENERAL INFORMATION:
; APPLICANT: KURONO, Masayasu
; APPLICANT: MITANI, Takahiko
; APPLICANT: TAKAHASHI, Haruo
; APPLICANT: SAWAI, Kiichi
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: ANALOGUES AND USE THEREOF
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
; ADDRESSEE: Murray
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D. C.
; COUNTRY: U. S. A.
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
US-08-201-092-1

Query Match          96.5%; Score 137; DB 1; Length 28;
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Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTLRKQMAVKYKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKYKYLNSILN 28

RESULT 8

US-07-924-054-11
; Sequence 11, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; ADDRESSEE: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109

COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-924-054-11

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTLRKQMAVKYKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKYKYLNSILN 28

RESULT 9

US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.

; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/243,082
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/853,754
; FILING DATE: 05-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Schneller, John W.
; REGISTRATION NUMBER: 26,031
; REFERENCE/DOCKET NUMBER: KUWAT 0010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 828-8000
; TELEFAX: (202) 828-8038
; TELEX: SPENCER 64267
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
US-08-243-082-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTLRKQMAVKYKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKYKYLNSILN 28

RESULT 10

US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/361,443
; FILING DATE:
; CLASSIFICATION: 530

;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLSILN 28

RESULT 11
US-08-288-681A-1
;; Sequence 1, Application US/08288681A
;; Patent No. 5595897
;; GENERAL INFORMATION:
;; APPLICANT: MIDOUX, PATRICK; ERBACHER,
;; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
;; APPLICANT: MONSIGNY, MICHEL
;; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
;; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
;; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
;; NUMBER OF SEQUENCES: 7
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: BIERMAN & MUSERLIAN
;; STREET: 600 THIRD AVENUE
;; CITY: NEW YORK
;; STATE: NEW YORK
;; COUNTRY: USA
;; ZIP: 10016

COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/288,681A
FILING DATE: 10-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR/94/05174
FILING DATE: 28-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: CHARLES A. MUSERLIAN
REGISTRATION NUMBER: 19,683
REFERENCE/DOCKET NUMBER: 410.005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 661-8000
TELEFAX: (212) 661-8002
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28
TYPE: Amino Acid
STRANDEDNESS: Unknown
TOPOLOGY: Unknown
MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLSILN 28

RESULT 12
US-07-776-272-26
;; Sequence 26, Application US/07776272
;; Patent No. 5612454
;; GENERAL INFORMATION:
;; APPLICANT: Kaminuma, Toshihiko
;; APPLICANT: Lida, Toshi
;; APPLICANT: Tajima, Masahiro
;; TITLE OF INVENTION: Process for Purification of Polypeptide
;; NUMBER OF SEQUENCES: 31
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: Wegner, Cantor, Mueller & Player
;; STREET: 1233 20th St. N.W. P.O. Box 18218
;; CITY: Washington
;; STATE: District of Columbia
;; COUNTRY: United States of America
;; ZIP: 20036-8218
;; COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/776,272
FILING DATE: 19911129
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Player, William E
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-450-23167
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELEFAX: 202-887-0605
TELEX: 440706
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: YES
US-07-776-272-26

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLSILN 28

RESULT 13
US-08-308-729-1
;; Sequence 1, Application US/08308729
;; Patent No. 5677419
;; GENERAL INFORMATION:
;; APPLICANT: Bolin, David R.
;; TITLE OF INVENTION: Cyclic Vasoactive Peptide
;; TITLE OF INVENTION: Analogs
;; NUMBER OF SEQUENCES: 73
;; CORRESPONDENCE ADDRESS:
;; ADDRESSEE: Hoffmann-La Roche Inc.
;; STREET: 340 Kingsland Street
;; CITY: Nutley
;; STATE: New Jersey
;; COUNTRY: USA
;; ZIP: 07110

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/308,729
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/153,530
FILING DATE:
APPLICATION NUMBER: US 07/773,747
FILING DATE: 11-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pokras, Bruce A.
REGISTRATION NUMBER: 32,748
REFERENCE/DOCKET NUMBER: 8322
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-5801
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORGANISM: Sus scrofa
PUBLICATION INFORMATION:
DOCUMENT NUMBER: EP 325 044 A A
FILING DATE: 22-DEC-1987
PUBLICATION DATE: 26-JUL-1989
RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
US-08-308-729-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
US-08-062-472B-40
Sequence 40, Application US/08062472B
Patent No. 5695954
GENERAL INFORMATION:
APPLICANT: Sherwood, Nancy G M
APPLICANT: Parker, David B
APPLICANT: McRory, John E
APPLICANT: Lescheid, David W
TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
ADDRESS: WHINSTON, LLP
STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
CITY: PORTLAND
STATE: OREGON
COUNTRY: USA
ZIP: 97204-2988
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/062,472B
FILING DATE: 14-MAY-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: POLLEY, RICHARD J
REGISTRATION NUMBER: 28107
TELECOMMUNICATION INFORMATION:
TELEPHONE: (503) 226-7391
TELEFAX: (503) 228-9446
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-062-472B-40

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 15
US-08-171-701A-1
Sequence 1, Application US/08171701A
Patent No. 5721211
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TREATING SMALL CELL AND NONSMALL
CELL LUNG CANCERS
NUMBER OF SEQUENCES: 3
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect, Version 5.1 Plus
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/171,701A
FILING DATE: December 22, 1993
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 Amino Acids
TYPE: Amino Acid
TOPOLOGY: Linear
MOLECULE TYPE: Peptide
FRAGMENT TYPE: N-terminal
FEATURE:
NAME/KEY: Modified-site
LOCATION: 1
OTHER INFORMATION:
FEATURE:
NAME/KEY: Modified-site
LOCATION: 28
OTHER INFORMATION:
US-08-171-701A-1

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:23:43
Job time : 21.875 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA.Main:*
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2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
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6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	142	100.0	28	3	US-09-929-818-190
2	137	96.5	28	3	US-09-929-818-1
3	137	96.5	28	3	US-09-929-818-188
4	137	96.5	28	3	US-09-929-818-189
5	137	96.5	28	3	US-09-999-745-53
6	137	96.5	28	3	US-09-954-000-37
7	137	96.5	28	4	US-10-090-109A-1
8	137	96.5	28	4	US-10-044-722-8
9	137	96.5	28	4	US-10-004-530A-17
10	137	96.5	28	4	US-10-114-716A-3
11	137	96.5	28	4	US-10-211-994-1
12	137	96.5	28	4	US-10-197-954-145
13	137	96.5	28	4	US-10-100-256B-1
14	137	96.5	28	4	US-10-254-569A-1
15	137	96.5	28	4	US-10-201-288-31
16	137	96.5	28	4	US-10-343-654-22
17	137	96.5	28	4	US-10-416-822-1
18	137	96.5	28	4	US-10-467-059-14
19	137	96.5	28	5	US-10-494-634-7
20	137	96.5	28	5	US-10-718-071-36
21	137	96.5	28	5	US-10-788-563-17
22	137	96.5	28	5	US-10-760-085-145
23	137	96.5	28	5	US-10-892-981A-1
24	137	96.5	28	5	US-10-769-803-2
25	137	96.5	28	5	US-10-919-325-32
26	137	96.5	28	5	US-10-898-143-1
27	137	96.5	28	5	US-10-930-548-3

28	137	96.5	28	5	US-10-770-712-56	Sequence 56, Appl
29	137	96.5	28	5	US-10-799-897A-1	Sequence 1, Appl
30	137	96.5	28	6	US-11-066-697-454	Sequence 454, App
31	137	96.5	28	6	US-11-066-697-455	Sequence 455, App
32	137	96.5	29	4	US-10-131-543-11	Sequence 11, Appl
33	137	96.5	29	4	US-10-131-546-11	Sequence 11, Appl
34	137	96.5	29	4	US-10-131-346-11	Sequence 11, Appl
35	137	96.5	29	4	US-10-415-024-11	Sequence 11, Appl
36	137	96.5	29	6	US-11-086-596-11	Sequence 11, Appl
37	137	96.5	29	6	US-11-086-966-11	Sequence 11, Appl
38	137	96.5	30	3	US-09-929-818-203	Sequence 203, App
39	137	96.5	30	3	US-09-929-818-204	Sequence 204, App
40	137	96.5	30	3	US-09-929-818-205	Sequence 205, App
41	137	96.5	31	4	US-10-131-543-9	Sequence 9, Appl
42	137	96.5	31	4	US-10-131-543-10	Sequence 10, Appl
43	137	96.5	31	4	US-10-131-543-16	Sequence 16, Appl
44	137	96.5	31	4	US-10-131-546-9	Sequence 9, Appl
45	137	96.5	31	4	US-10-131-546-10	Sequence 10, Appl

ALIGNMENTS

RESULT 1
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013-24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 190
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-190

Query Match 100.0%; Score 142; DB 3; Length 28;
Best Local Similarity 100.0%; Pred. No. 4.5e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28
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DB 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

RESULT 2
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

RESULT 4
US-09-929-818-189
; Sequence 189. Application US/09929818


```
; GENERAL INFORMATION:
; APPLICANT: Tien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; TITLE OF INVENTION: DETECTION OF ANALYTES
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match          96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 7
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:
; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; TITLE OF INVENTION: VPAC1R, VPAC2R, and PAC1R Agonists
; FILE REFERENCE: G80-O16 CIP
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DICICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; TITLE OF INVENTION: mitogenic signal for selected neuronal precursors in vivo
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
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; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; PRIOR APPLICATION data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match          96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 10
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
```

Wed Feb 8 17:49:05 2006

us-10-626-719-4.rapbm

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; TITLE OF INVENTION: Covalently Reactive Transition State
; FILE REFERENCE: UTH001H
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

```

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Query Match 96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

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RESULT 11
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

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Query Match 96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

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RESULT 12
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; FILE REFERENCE: Compositions

```

```

; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

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Query Match 96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

```

```

RESULT 13
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
; TITLE OF INVENTION: RADIOLABELLED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-DI1
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

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Query Match 96.5%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

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```

RESULT 14
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1

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Search completed: January 25, 2006, 15:31:04
Job time : 54.625 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2006 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: us-10-626-719-4

Perfect score: 142

Sequence: 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

- Published Applications AA_New.*
- 1: /cgn2_6/prodata/2/pubpa/US08_NEW_PUB.pap.*
 - 2: /cgn2_6/prodata/2/pubpa/US06_NEW_PUB.pap.*
 - 3: /cgn2_6/prodata/2/pubpa/US07_NEW_PUB.pap.*
 - 4: /cgn2_6/prodata/2/pubpa/PCT_NEW_PUB.pap.*
 - 5: /cgn2_6/prodata/2/pubpa/US09_NEW_PUB.pap.*
 - 6: /cgn2_6/prodata/2/pubpa/US10_NEW_PUB.pap.*
 - 7: /cgn2_6/prodata/2/pubpa/US11_NEW_PUB.pap.*
 - 8: /cgn2_6/prodata/2/pubpa/US60_NEW_PUB.pap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	96.5	28	7	US-11-175-690-352
2	137	96.5	28	7	US-11-175-690-353
3	137	96.5	637	7	US-11-175-690-265
4	137	96.5	637	7	US-11-175-690-266
5	101	71.1	636	7	US-11-175-690-240
6	100	70.4	27	7	US-11-175-690-326
7	100	70.4	27	7	US-11-175-690-327
8	100	70.4	38	7	US-11-175-690-328
9	100	70.4	38	7	US-11-175-690-329
10	100	70.4	636	7	US-11-175-690-239
11	100	70.4	647	7	US-11-175-690-241
12	100	70.4	647	7	US-11-175-690-242
13	75	52.8	636	7	US-11-175-690-278
14	74	52.1	27	7	US-11-175-690-364
15	74	52.1	27	7	US-11-175-690-365
16	74	52.1	636	7	US-11-175-690-277
17	69	48.6	30	7	US-11-112-277-30
18	65	45.8	30	7	US-11-112-277-2
19	58	40.8	30	7	US-11-112-277-29
20	58	40.8	49	6	US-10-997-081A-26
21	58	40.8	49	6	US-10-997-081A-27
22	58	40.8	49	6	US-10-997-081A-28
23	58	40.8	49	6	US-10-997-081A-29
24	58	40.8	49	6	US-10-997-081A-30
25	58	40.8	49	6	US-10-997-081A-31

26	58	40.8	49	6	US-10-997-081A-32	Sequence 32, Appl
27	58	40.8	49	6	US-10-997-081A-35	Sequence 35, Appl
28	58	40.8	95	6	US-10-997-081A-25	Sequence 25, Appl
29	58	40.8	97	6	US-10-997-081A-11	Sequence 11, Appl
30	58	40.8	97	6	US-10-997-081A-18	Sequence 18, Appl
31	58	40.8	97	6	US-10-997-081A-19	Sequence 19, Appl
32	58	40.8	97	6	US-10-997-081A-20	Sequence 20, Appl
33	58	40.8	97	6	US-10-997-081A-21	Sequence 21, Appl
34	58	40.8	97	6	US-10-997-081A-22	Sequence 22, Appl
35	58	40.8	97	6	US-10-997-081A-23	Sequence 23, Appl
36	58	40.8	97	6	US-10-997-081A-40	Sequence 40, Appl
37	58	40.8	97	6	US-10-997-081A-41	Sequence 41, Appl
38	58	40.8	105	6	US-10-997-081A-10	Sequence 10, Appl
39	57	40.1	30	7	US-11-112-277-31	Sequence 31, Appl
40	51	35.9	636	7	US-11-175-690-268	Sequence 268, App
41	50	35.2	27	7	US-11-175-690-354	Sequence 354, App
42	50	35.2	27	7	US-11-175-690-355	Sequence 355, App
43	50	35.2	636	7	US-11-175-690-267	Sequence 267, App
44	47	33.1	556	7	US-11-124-368A-303	Sequence 303, App
45	46	32.4	30	7	US-11-174-089-181	Sequence 181, App

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseeltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 96.5%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.8e-15;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKYLSILN 28
| | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTQNYTLRKQMAVKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

```
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match          96.5%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.8e-15;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
Db      1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          96.5%; Score 137; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 2.3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
      ||||| ||||| ||||| ||||| |||||
Db      25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
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1 HSDAVFTONYTRLRKOMAVKXYLSIL 27 QV

```


```
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

Query Match 70.4%; Score 100; DB 7; Length 636;
Best Local Similarity 66.7%; Pred. No. 9.6e-08;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTONYTRLRKOMAVKKYLSIL 27
Db 610 HSDGIFTDSYSRYRKMVKKYLAAVL 636

RESULT 11
US-11-175-690-241
; Sequence 241, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; PRIOR FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

Query Match 70.4%; Score 100; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 9.8e-08;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTONYTRLRKOMAVKKYLSIL 27
Db 610 HSDGIFTDSYSRYRKMVKKYLAAVL 636

RESULT 12
US-11-175-690-242
; Sequence 242, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; PRIOR FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
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```



```

RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364

Query Match          52.1%; Score 74; DB 7; Length 27;
Best Local Similarity 44.4%; Pred.No. 28-05;
Matches 12; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

QY      1 HSDAVFTQNYTRLRKQMAYKKYLNSIL 27
       | | | | : : : | : : | | | | : :
Db      1 HDGVFTSDFSKLLGQLSAKKYLESILM 27

RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-4

Perfect score: 142

Sequence: 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

PIR_80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	96.5	28	B60071	vasoactive intesti
2	137	96.5	28	A60304	vasoactive intesti
3	137	96.5	55	VRBO	vasoactive intesti
4	137	96.5	55	VRBH	vasoactive intesti
5	137	96.5	55	VRSH	vasoactive intesti
6	137	96.5	58	VRPG	vasoactive intesti
7	137	96.5	145	A60038	vasoactive intesti
8	137	96.5	170	VRHU	vasoactive intesti
9	137	96.5	170	VRRT	vasoactive intesti
10	137	96.5	170	A60037	vasoactive intesti
11	124	87.3	55	VRGP	vasoactive intesti
12	122	85.9	165	VRCH	vasoactive intesti
13	121	85.2	28	A60303	vasoactive intesti
14	114	80.3	28	A38232	vasoactive intesti
15	111	78.2	25	JQ0361	vasoactive intesti
16	100	70.4	27	A61071	pituitary adenylat
17	100	70.4	38	A49165	pituitary adenylat
18	100	70.4	173	A34767	neuropeptides prec
19	100	70.4	175	A37786	pituitary adenylat
20	100	70.4	175	I84638	pituitary adenylat
21	100	70.4	195	A34044	pituitary adenylat
22	100	70.4	175	I50456	pituitary adenylat
23	94	66.2	38	A61070	pituitary adenylat
24	87	61.3	35	HWGHD	exendin-2 - Gila m
25	80	56.3	38	HWGHS	exendin-1 - Mexica
26	71	50.0	104	A32731	somatoliberin prec
27	70	49.3	103	A41410	somatoliberin prec
28	63	44.4	27	SECH	secretin - chicken
29	63	44.4	44	RHBOS	somatoliberin - bo

30	58	40.8	44	1	RHPG	somatoliberin - pi
31	58	40.8	108	1	RHHUS	somatoliberin prec
32	58	40.8	443	2	C70392	gamma-glutamyl pho
33	56	39.4	206	2	I51301	proglucagon - chic
34	53	37.3	772	2	C69990	transcription regu
35	52	36.6	27	2	A27267	secretin - dog
36	52	36.6	276	2	AD1860	two-component resp
37	52	36.6	418	2	A97300	gamma-glutamyl pho
38	51.5	36.3	266	2	E71612	ribosomal protein
39	50	35.2	27	1	S07443	secretin - human
40	50	35.2	27	1	SEBO	secretin - bovine
41	50	35.2	27	1	SESH	secretin - sheep
42	50	35.2	131	1	SEPG	secretin precursor
43	50	35.2	168	2	F90095	hypothetical prote
44	50	35.2	194	2	T27608	hypothetical prote
45	50	35.2	194	2	T29172	hypothetical prote

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque

C:Species: Macaca mulatta (rhesus macaque)

C>Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C:Accession: B60071

R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences.

A:Reference number: A60071; MUID:91164506; PMID:2003150

A:Accession: B60071

A:Molecule type: protein

A:Status: protein sequence not shown

A:Residues: 1-28 <YR>

A:Cross-references: UNIPARC:UPI000002D1C0

A>Note: the sequence is identical with the human sequence

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 96.5%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N:Alternate names: VIP

C:Species: Canis lupus familiaris (dog)

C>Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C:Accession: A60304

R:Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A:Title: Purification and sequencing of dog and guinea pig VIP's.

A:Reference number: A60304

A:Accession: A60304

A:Molecule type: protein

A:Residues: 1-28 <ENG>

A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 96.5%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

DB 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

Query Match	Best Local Similarity	Matches	96.5%;	Score 137;	DB 1;	Length 55;	96.4%;	Pred. No. 3.6e-13;	Mismatches	1;	Indels	0;	Gaps	0;
Query Match														
Best Local Similarity														
Matches														
96.5%;														
Score 137;														
DB 1;														
Length 55;														
96.4%;														
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A:Accession: A01549
 A:Molecule type: protein
 A:Residues: 1-27 <TA>
 A:Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
 R:Tatamoto, K.

Regul. Pept. 6, 330, 1983
 A:Title: PHI - a new brain-gut peptide.

A:Reference number: A60300

A:Accession: A60300

A:Molecule type: protein

A:Residues: 1-27 <TA2>

A:Cross-references: UNIPARC:UPI00000351DB

R:Mutt, V.; Said, S.I.

Eur. J. Biochem. 42, 581-589, 1974

A:Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
 A:Reference number: A01550; MUID:74167323; PMID:4829446

A:Accession: A01550

A:Molecule type: protein

A:Residues: 28-55 <MUT>

A:Cross-references: UNIPARC:UPI000002D1C0

R:Gafvelin, G.; Andersson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.

Peptides 9, 469-474, 1988

A:Title: Isolation and characterization of a variant form of vasoactive intestinal poly
 A:Reference number: JT0417; MUID:88335763; PMID:2843830

A:Accession: JT0417

A:Molecule type: protein

A:Residues: 28-58 <GAF>

A:Cross-references: UNIPARC:UPI000002B99A

A:Note: this extended form is active in a VIP assay but is probably an incompletely pro
 R:Bodanszky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.

J. Am. Chem. Soc. 96, 4973-4978, 1974

A:Reference number: A26231; MUID:74308014; PMID:4854585

A:Contents: annotation

A:Note: a 28-residue peptide having the sequence and biological activities (in two assay
 R:Ichiki, Y.; Kitamura, K.; Kawamoto, M.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992

A:Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
 A:Reference number: A56754; MUID:93038640; PMID:1329741

A:Accession: A56754

A:Molecule type: protein

A:Residues: 1-24 <ICH>

A:Cross-references: UNIPARC:UPI0000173514

A:Experimental source: duodenum

A:Note: Sequence extracted from NCBI backbone (NCBIP:114219)

R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht,
 Biochim. Biophys. Acta 1038, 355-359, 1990

A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A:Reference number: S09688; MUID:90254163; PMID:2340294

A:Contents: annotation

C:Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
 of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; neuropeptide

F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>

F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F:7/Modified site: amidated carboxyl end (ile) (in mature form) #status experimental

F:55/Modified site: amidated carboxyl end (asn) (amide in mature form from following gly

Query Match 96.5%; Score 137; DB 1; Length 58;

Best Local Similarity 96.4%; Pred. No. 3.8e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKYLNLSLN 28

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Db 28 HSDAVFTDNYTRLRKQMAVKYLNLSLN 55

RESULT 7

A60038

vasoactive intestinal peptide precursor - crab-eating macaque (fragment)

C:Species: Macaca fascicularis (crab-eating macaque)

C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004

C:Accession: A60038

R:Benson, D.L.; Isackson, P.J.; Jones, E.G.
 Brain Res. Mol. Brain Res. 9, 169-174, 1991

A:Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey ar

A:Reference number: A60038; MUID:91203476; PMID:1850073

A:Accession: A60038

A>Status: not compared with conceptual translation

A:Molecule type: mRNA

A:Residues: 1-145 <BEN>

A:Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C

C:Superfamily: glucagon

C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil

Query Match 96.5%; Score 137; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 9.9e-13;

Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKYLNLSLN 28

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Db 100 HSDAVFTDNYTRLRKQMAVKYLNLSLN 127

RESULT 8

VRHU

vasoactive intestinal peptide precursor [validated] - human

N:Alternate names: VIP precursor

N:Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); vas

C:Species: Homo sapiens (man)

C:Date: 14-Nov-1983 #sequence revision 14-Nov-1983 #text change 09-Jul-2004

C:Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; A016

R:Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.

DNA 4, 293-300, 1985

A:Title: Structure of the human vasoactive intestinal polypeptide gene.

A:Reference number: A09052; MUID:86004065; PMID:3899557

A:Accession: A23296

A:Molecule type: DNA

A:Residues: 1-170 <TSU>

A:Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:g340243; PIDN:9

A:Note: the authors translated the codon GAA for residue 48 as Gln

R:Ittoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983

A:Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pep

A:Reference number: A93313; MUID:83271523; PMID:6571696

A:Accession: A93313

A:Molecule type: mRNA

A:Residues: 1-170 <ITO>

A:Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA612

R:Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1136-1141, 1987

A:Title: Vasoactive intestinal peptide gene: putative mechanism of information storage at

A:Reference number: A60205; MUID:87140054; PMID:2434617

A:Accession: A60205

A:Molecule type: mRNA

A:Residues: 78-155 <GOZ>

A:Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:g340250; PIDN:AAA612

A:Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron

R:Linde, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A:Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A:Reference number: A26361; MUID:87092456; PMID:3025882

A:Accession: A26361

A:Molecule type: DNA

A:Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A:Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:9

A:Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue 1

R:Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A:Title: Isolation, characterization, and pharmacological actions of peptide histidine va

A:Reference number: A27419; MUID:88007645; PMID:3654650

A:Accession: A27419

A:Molecule type: protein

A:Residues: 81-122 <YIA>

A:Cross-references: UNIPARC:UPI000000351DE

R:Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
 A>Title: Isolation and characterization of peptides which act on rat platelets, from a p
 A/Reference number: JH0618; MUID:92287083; PMID:1318039
 A/Accession: JH0618
 A/Molecule type: protein
 A/Residues: 125-152 <KIT>
 A/Cross-references: UNIPARC:UPI000002D1C0
 A/Experimental source: pheochromocytoma
 R/Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaiharu, N.; Yamamoto
 Ann. N. Y. Acad. Sci. 527, 87-102, 1988
 A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
 A/Reference number: IS1955; MUID:88267775; PMID:2839091
 A/Accession: IS1955
 A/Status: translated from GB/EMBL/DBJ
 A/Molecule type: DNA
 A/Residues: 1-170 <RES>
 A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:G340253; PIDN:AAA69515.1; PID:
 R/Gozes, I.; Giladi, E.; Shani, Y.
 J. Neurochem. 47, 1136-1141, 1987
 A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
 A/Reference number: IS6494
 A/Accession: IS6494
 A/Status: preliminary; translated from GB/EMBL/DBJ
 A/Molecule type: DNA
 A/Residues: 78-155 <RE2>
 A/Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:G340250; PIDN:AAA61285.1; PID:
 R/Bloom, S.R.; Christofides, N.D.; Delamarier, J.; Buell, G.; Kawashima, E.; Polak, J.M.
 Lancet 2, 1163-1165, 1993
 A>Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
 A/Reference number: IS6988; MUID:84066682; PMID:6139527
 A/Accession: IS6988
 A/Status: preliminary; translated from GB/EMBL/DBJ
 A/Molecule type: mRNA
 A/Residues: 50-170 <RE3>
 A/Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:G340247; PIDN:AAA63268.1; PID:
 C/Genetics:
 A/Gene: GDB:VIP
 A/Cross-references: GDB:120490; OMIM:192320
 A/Map position: q26-q27
 A/Introns: 36/2; 77/2; 112/2; 156/2
 C/Superfamily: glucagon
 C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuroh
 F/1-20/Domain: signal sequence #status predicted <SIG>
 F/81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
 F/81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
 F/125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
 F/68/133/Binding site: carboxyl end (Met) (amide in mature form from following gl
 F/107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
 F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
 Query Match 96.5%; Score 137; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 1.2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 Db 125 HSDAVFTQNYTRLRKQMAVKKYLNSILN 152
 RESULT 9
 VRRV
 N/Contains: peptide histidine-iso-leucine (PHI-27); vasoactive intestinal peptide (VIP)
 C/Species: Rattus norvegicus (Norway rat)
 C/Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
 C/Accession: A60037; B60037; A01548; A28102; A60586; A60587; S09691
 R/Giladi, E.; Shani, Y.; Gozes, I.
 Brain Res. Mol. Brain Res. 7, 261-267, 1990
 A>Title: The complete structure of the rat VIP gene.
 A/Reference number: A60033; MUID:90244869; PMID:2159586
 A/Accession: A60033
 A/Molecule type: DNA
 A/Residues: 1-170 <GIL>

A/Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
 A/Note: the authors translated the codon GAG for residue 67 as Gln
 R/Lamperti, E.D.; Rozen, K.M.; Villa-Komaroff, L.
 Brain Res. Mol. Brain Res. 9, 217-231, 1991
 A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
 A/Reference number: A60037; MUID:91232388; PMID:11851524
 A/Accession: B60037
 A/Status: not compared with conceptual translation
 A/Molecule type: DNA
 A/Residues: 78-155 <LAM>
 A/Cross-references: UNIPARC:UPI0000173511
 R/Nishizawa, M.; Hayakawa, Y.; Yanaiharu, N.; Okamoto, H.
 FEBS Lett. 183, 55-59, 1985
 A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
 A/Reference number: A01548; MUID:85154612; PMID:3838518
 A/Accession: A01548
 A/Molecule type: mRNA
 A/Residues: 9-170 <NIS>
 A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:G57481; PIDN:CAA26200.1; PID:G:
 A/Experimental source: cerebral cortex
 R/Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
 J. Biol. Chem. 263, 9083-9086, 1988
 A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
 A/Reference number: A28102; MUID:88243784; PMID:3379062
 A/Accession: A28102
 A/Molecule type: protein
 A/Residues: 134-152 <GOE>
 A/Cross-references: UNIPARC:UPI00000351E4
 R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Christ
 Endocrinology 125, 1296-1302, 1989
 A>Title: Peptide histidine isoleucinamide (PHI) - (1-27)-Gly as a new major form of PHI in
 A/Reference number: A60586; MUID:89338237; PMID:2759027
 A/Accession: A60586
 A/Molecule type: protein
 A/Residues: 81-108 <CAU>
 A/Cross-references: UNIPARC:UPI0000173512
 R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
 Endocrinology 125, 2645-2655, 1989
 A>Title: Variable distribution of three molecular forms of peptide histidine isoleucinam
 A/Reference number: A60587; MUID:90005222; PMID:2792003
 A/Accession: A60587
 A/Molecule type: protein
 A/Residues: 81-122 <CA2>
 A/Cross-references: UNIPARC:UPI0000173513
 R/Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.
 Biochim. Biophys. Acta 1038, 355-359, 1990
 A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A/Reference number: S09688; MUID:90254163; PMID:2340294
 A/Contents: annotation; comparison of mammalian PHI sequences
 C/Comment: Two active peptides are released from the VIP precursor by cleavage at paired
 C/Genetics:
 A/Introns: 36/2; 77/2; 156/2
 C/Superfamily: glucagon
 C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
 F/1-21/Domain: signal sequence #status predicted <SIG>
 F/81-122/Product: PHI-42 #status experimental <PH42>
 F/81-108/Product: PHI-27-Gly #status experimental <PHIG>
 F/81-107/Product: peptide histidine-iso-leucine (PHI-27) #status predicted <PHI>
 F/125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
 F/107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
 F/133/Binding site: carboxyl end (Asn) (amide in mature form from following gl
 F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
 Query Match 96.5%; Score 137; DB 1; Length 170;
 Best Local Similarity 96.4%; Pred. No. 1.2e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
 Db 125 HSDAVFTQNYTRLRKQMAVKKYLNSILN 152

C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodil
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 87.3%; Score 124; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 2.9e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQWAVKKYLSILN 28
|||||:|||||:|||||:|||||:|||||:
Db 28 HSDALFTDYYTRLRKQWAVKKYLSVLN 55

RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 24-Apr-1984 #sequence revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A30720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <TAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:g531364; PIDN:
R.Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <NIL>
A;Cross-references: UNIPARC:UPI00000351E1
R;Bodanszky, M.; Lin, C.Y.; Viotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A;Reference number: A90720
A;Contents: synthesis
A;Accession: A90720
A;Molecule type: protein
A;Residues: 107-121 <BOD>
A;Cross-references: UNIPARC:UPI0000173517
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 85.9%; Score 122; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 1.8e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQWAVKKYLSIL 27
|||||:|||||:|||||:|||||:|||||:
Db 94 HSDAVFTDYSRFRKQWAVKKYLSVL 120

RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 10-Nov-1992 #sequence revision 10-Nov-1992 #text_change 09-Jul-2004
C;Accession: A60303; A60314; S07432
R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A;Reference number: A60303
A;Accession: A60303

A;Molecule type: protein
A;Residues: 1-28 <DM>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A;Note: this reference is an abstract
R;Dimoline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI000017662D
R;Dimoline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N.Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A;Reference number: S07432
A;Accession: S07432
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <DI3>
A;Cross-references: UNIPARC:UPI000013884B
C;Superfamily: Glucagon
C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 85.2%; Score 121; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 3.9e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSIL 27
||||| :|||:|||||:|:|
Db 1 HSDAVFTDYSRLRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N;Alternate names: VIP
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C;Accession: A38232
R;Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A;Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A;Reference number: A38232; MUID:92179271; PMID:1542675
A;Accession: A38232
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A;Note: sequence extracted from NCBI backbone (NCBIP:87215)
C;Superfamily: Glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 80.3%; Score 114; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 4.1e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
||||| :|||:|||||:|:|
Db 1 HSDAVFTDSYTRLRKQMAVKKYLDSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C;Accession: JQ0361
R;Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimoline, R.
Regul. Pept. 21, 436, 1988
A;Title: Isolation and characterisation of two teleost VIP's.
A;Reference number: JQ0361

A;Accession: JQ0361
A;Molecule type: protein
A;Residues: 1-25 <THM>
A;Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 78.2%; Score 111; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 1e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKKYLNS 25
||||| :|||:|||||:|:|
Db 1 HSDAVFTDYSRLRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 13.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell upd.

Title: US-10-626-719-4
Perfect score: 142
Sequence: 1 HSDAVFTQNTYRLRKQMAVKYKYLNSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

```

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                  Maximum Match 10%
                  Listing first 45

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Database :      UniProt_05.80:*
1: uniprot_sprot:*
2: uniprot_trembl:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query		DB	ID	Description
		Match	Length			
1	137	96.5	28	1	VIP CANFA	P63289 canis famill
2	137	96.5	28	1	VIP CAPHI	P63290 capra hircu
3	137	96.5	28	1	VIP MACMU	P84888 macaca mula
4	137	96.5	28	1	VIP SHEEP	P63291 ovis aries
5	137	96.5	72	1	VIP PIG	P01284 sus scrofa
6	137	96.5	72	1	VIP RABIT	P32649 oryctolagus
7	137	96.5	118	2	Q5TCY7 HUMAN	Q5TCY7 homo sapien
8	137	96.5	145	2	Q7M2Y9 MACFA	Q7M2Y9 macaca fasc
9	137	96.5	153	2	Q7TSR4 9MURI	Q7TSR4 arvicanthris
10	137	96.5	169	2	Q5TCY8 HUMAN	Q5TCY8 homo sapien
11	137	96.5	170	1	VIP BOVIN	P81401 bos taurus
12	137	96.5	170	1	VIP HUMAN	P01282 homo sapien
13	137	96.5	170	1	VIP MOUSE	P32648 mus musculu
14	137	96.5	170	1	VIP RAT	P01283 rattus norv
15	137	96.5	170	2	Q5TCY9 HUMAN	Q5TCY9 homo sapien
16	137	96.5	171	2	Q9DZT7_MOUSE	Q9DZT7 mus musculu
17	134	87.3	72	1	VIP CAVPO	P04566 cavia porce
18	122	85.9	28	1	VIP ALIMI	P48142 alligator m
19	122	85.9	28	1	VIP RANRI	P81016 rana ridibu
20	122	85.9	70	2	Q4TX3 ANAPL	Q4TX3 anas platyr
21	122	85.9	86	2	Q4TZY9 9AVES	Q4TZY9 anser anser
22	122	85.9	200	1	VIP CHICK	P48143 gallus gall
23	122	85.9	200	1	VIP MELGA	P45644 meleagris g
24	122	85.9	202	2	Q7ZYGB XENLA	Q7ZYGB xenopus lae
25	121	85.2	28	1	VIP SGVCA	P09685 scylliorhinu
26	121	85.2	28	2	Q9PR19 AMICA	Q9PR19 scyllia calva
27	121	85.2	147	2	Q4SQN2 TETNG	Q4SQN2 tetraodon n
28	117	82.4	28	2	Q9PRNE CARAU	Q9PRNE carassius a
29	114	80.3	28	1	VIP DIDMA	P39088 didelphis m
30	111	78.2	35	1	VIP GADMO	P09684 gadus morhu
31	104	73.2	28	2	Q75W85 MISAN	Q75W85 misgurnus a

RESULT 1

VF001	VFIP-CANFA	STANDARD;	PRT;	28 AA.
ID	- VIP CANFA			
AC	P63289; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			
DE	Name=VIP;			
OS	Canis familiaris (Dog).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Canidae;			
OC	Canis.			
OX	NCBI_TaxID=9615;			
RN	[1]			
RP	PROTEIN SEQUENCE.			
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;			
RA	Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;			
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs.";			
RL	Peptides 7 Suppl. 1:17-20(1986).			

CC -I- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC
CC -I- SUBCELLULAR LOCATION: Secreted.
CC
CC -I- SIMILARITY: Belongs to the glucagon family.
CC
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation
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CC use as long as its content is in no way modified and this statement is not
CC removed.

CC	PIR; A60304; A60304.
DR	HSSP; P18509; 1GEA.
DR	Ensembl; ENSCAFG00000000538; Canis familiaris.
DR	InterPro; IPR000532; Glucagon.
DR	Pfam; PF001123; Hormone 2; 1.
DR	PRINTS; PR00275; GLUCAGON.
DR	SMART; SM00070; GLUCA; 1.
DR	PROSITE; PS00260; GLUCAGON; 1.
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT	MOD RES 28 328 Asparagine amide.
SQ	SEQUENCE 28 AA; 3327 MW; EF313PB573FF6F3F CRC64;

Query Match	96.5%	Score 137;	DB 1;	Length 28;
Best Local Similarity	96.4%	Pred. No. 3.8e-13;		
Matches 27;	Conservative	0;	Mismatches 1;	Indels 0;
			Gaps	0;

QY 1 HSDAVFTONYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

```

RESULT 2
VIP_CAPHI
ID_VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63290; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OX NCBI_TaxID=9925;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;
RT VIPs.;
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC HSSP: P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
FT SEQUENCE 28 AA; 3327 MW; EF313PB573FF6F3F CRC64;
Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

RESULT 3
VIP_MACMU
ID_VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DT 13-SEP-2005 (Rel. 48, Created)
DT 13-SEP-2005 (Rel. 48, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopithecinae; Macaca.
OX NCBI_TaxID=9544;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RA Yu J.-H.; Xin Y.; Eng J.; Yalow R.S.;

us-10-626-719-4.rup

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RT "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RT sequences.";
RL Regul. Pept. 32:39-45(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC PIR; B60071; B60071.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
FT SEQUENCE 28 AA; 3327 MW; EF313PB573FF6F3F CRC64;
Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
|||||

RESULT 4
VIP_SHEEP
ID_VIP_SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name=VIP;
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Brain;
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RA Gafvelin G.;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Bounjoua Y.; Vandermeers A.; Robberecht P.; Vandermeers-Piret M.C.;
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucineamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A.; Jiang L.; Stibbs H.H.; Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

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RL Regul. Pept. 38:145-154(1992).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR PIR; B60072; VRSH.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3P CRC64;

Query Match 96.5%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.8e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKYLNLSLN 28
Db 1 HSDAVFTDNYTRLRKQMAVKYLNLSLN 28

RESULT 5
ID_VIP_PIG STANDARD; PRT; 72 AA.
AC P01284; Q9TRN0;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Names:VIP;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP PROTEIN SEQUENCE OF 1-27.
RX MEDLINE=82082498; PubMed=6947244;
RA Tatenoto K., Mutt V.;
RT "Isolation and characterization of the intestinal peptide porcine PHI
RT (PHI-27), a new member of the glucagon-secretin family.";
RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
RN [2]
RP PROTEIN SEQUENCE OF 1-24.
RC TISSUE=Duodenum;
RX MEDLINE=93038640; PubMed=1329741;
RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
RT "Organ distribution and characterization of porcine peptides (VIP,
RT CGRP and PHI) that increase cAMP in rat platelets.";
RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
RN [3]
RP PROTEIN SEQUENCE OF 28-58.
RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
RA Gavellin G., Andersson M., Dimoline R., Jornvall H., Mutt V.;
RT "Isolation and characterization of a variant form of vasoactive
RT intestinal polypeptide.";
RL Peptides 9:469-474(1988).
RN [4]
RP PROTEIN SEQUENCE OF 45-72.

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RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
RT amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589(1974).
RN [5]
RP SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RL J. Am. Chem. Soc. 96:4973-4978(1974).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR PIR; A01549; VRPG.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 27 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON_TER 1 1
FT NON_TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 96.5%; Score 137; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTQNYTRLRKQMAVKYLNLSLN 28
Db 45 HSDAVFTDNYTRLRKQMAVKYLNLSLN 72

RESULT 6
ID_VIP_RABIT STANDARD; PRT; 72 AA.
AC F32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

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Wed Feb 8 17:49:06 2006

RT "Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine";

RL Peptides 11:123-128(1990).

CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

CC -!- FUNCTION: PHI also causes vasodilation.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.

CC -!- SIMILARITY: Belongs to the glucagon family.

CC -----

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CC -----

DR HSSP; P18509; 1GEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR02275; GLUCAGON; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

KW Amidation; Cleavage on pair of basic residues;

KW Direct protein sequencing; Glucagon family; Hormone.

FT PEPTIDE 1 27

FT PPPTIDE 45 72

FT MOD_RES 27 27

FT MOD_RES 72 72

FT MOD_RES 72 72

FT NON_TER 1 1

FT NON_TER 72 72

SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 96.5%; Score 137; DB 1; Length 72;

Best Local Similarity 96.4%; Pred. No. 1e-12; Indels 0; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Db 45 HSDAVFTDNYTRLRKQMAVKYLSILN 72

RESULT 7

Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.

AC Q5TCY7;

DT 01-FEB-2005 (TrEMBLrel. 29, Created)

DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)

DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)

DE Vasoactive intestinal peptide (Fragment).

GN Name=VIP; ORFNames=RP4-546X19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;

OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;

OC Homo.

OX NCBI_TaxID=9606;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Johnson C.;

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

DR EMBL; AL133356; CAI21766.1; -, Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUCA; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 96.5%; Score 137; DB 2; Length 118;

Best Local Similarity 96.4%; Pred. No. 1.8e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Db 45 HSDAVFTDNYTRLRKQMAVKYLSILN 72

RESULT 8

Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.

AC Q7M2Y9;

DT 01-MAR-2004 (TrEMBLrel. 26, Created)

DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal peptide precursor (Fragment).

OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;

OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini;

OC Cercopitheidae; Cercopithecinae; Macaca.

OX NCBI_TaxID=9541;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;

RA Benson D.L.; Isackson P.J.; Jones E.G.;

RT "In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey and rat neocortex.";

RL Brain Res. Mol. Brain Res. 9:169-174 (1991).

DR PIR; A60038; A60038.

DR HSSP; P18509; 1GEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

FT NON_TER 145 145

SQ SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;

Query Match 96.5%; Score 137; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 2.2e-12; Indels 0; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKYLSILN 28

Db 100 HSDAVFTDNYTRLRKQMAVKYLSILN 127

RESULT 9

Q7TSR4_9MURI PRELIMINARY; PRT; 153 AA.

AC Q7TSR4_9MURI;

DT 01-OCT-2003 (TrEMBLrel. 25, Created)

DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal polypeptide (Fragment).

OS Arvicanthus ansorgei.

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;

OC Mammalia; Euthera; Euarchontoglires; Glires; Rodentia; Sciurognathi;

OC Muridae; Murinae; Arvicanthis.

OX NCBI_TaxID=204747;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pevet P.;

RA Masson-Pevet M.;

RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.

DR EMBL; AY225375; AAP15167.1; -, mRNA.

DR HSSP; P18509; 1GEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

```

DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match          96.5%; Score 137; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTRLRKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8_HUMAN
ID Q5TCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human)
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDPEF47132C3 CRC64;

Query Match          96.5%; Score 137; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTRLRKQMAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=2202342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Ductenium;

RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -I- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -I- FUNCTION: PHI also causes vasodilation.
CC -I- SUBCELLULAR LOCATION: Secreted.
CC -I- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -I- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC -----
DR EMBL; AF503910; AM28152.1; -; mRNA.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25 Potential.
FT PROPEP 26 79 Intestinal peptide PHI-27.
FT PEPTIDE 81 107
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match          96.5%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTRLRKQMAVKKYLNSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96OK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42; Intestinal peptide PHM-27 (Peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

```

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominoidea; Homo.
OC NCBI_TaxID=9606;
ON [1]
ON NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549(1983).
[2]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ono K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaiharu N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
[3]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
[4]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
[5]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamarier J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102(1985).
[6]
RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX TISSUE=Prostate;
RX MEDLINE=22389257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaby S.J.,
RA Bosak S.A., McRwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketterman M., Madan A.C., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzyzanski M.I., Skalska U., Smalus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
[7]
RN NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodner M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6(1986).
[8]
RN NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=Pancratic carcinoma;
RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
RA Bloom S.R., Delamarier J.F., Kawashima E., Christofides N.D.,
RA Buell G., Polak J.M.;
RT "Diarrhoea in vipoma patients associated with cosecretion of a second
RT active peptide (peptide histidine isoleucine) explained by single
RT coding gene.";
RL Lancet 2:1163-1165(1983).
[9]
RN NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
[10]
RN PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
[11]
RN PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RX MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
[12]
RN STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC EMBL; L00157; AAA61289.1; -; Genomic DNA.
CC EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; M33027; AAA69515.1; -; Genomic DNA.
CC EMBL; M11553; AAA61284.1; -; Genomic DNA.
CC EMBL; M11549; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11550; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11551; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11552; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M14623; AAA61288.1; -; Genomic DNA.
CC EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M36610; AAA61286.1; -; Genomic DNA.
CC EMBL; M36606; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; BC009794; AAH09794.1; -; mRNA.
CC EMBL; M36634; AAA61287.1; -; mRNA.

DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic_DNA.
DR PIR; A23296; VRHU.
DR HSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-INVD; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHI-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT CONFLICT 96 97 OL -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19166 MW; 93EC0177F89508FD CRC64;
Query Match 96.5%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE polypeptide]].
GN Names=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muroidae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lampert E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse."
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes.;
-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
-!- FUNCTION: PHM also causes vasodilation.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the glucagon family.
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EMBL; X74297; CAA52350.1; -; Genomic_DNA.
DR PIR; A60037; A60037.
DR HSP; P18509; IGEA.
DR Ensembl; ENSMUSG00000019772; Mus musculus.
DR MGI; MGI:98933; Vip.
DR GO; GO:0005615; C:extracellular space; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21 By similarity.
FT PROPEP 22 79
FT PEPTIDE 81 122 Intestinal peptide PHI-42 (By similarity).
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;
Query Match 96.5%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTQNTYRLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE polypeptide]].
GN Names=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muroidae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";


```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RA Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turk C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
-----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
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DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRT.
DR HSP; P18509; IGEA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL. 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CARBOHYD 68 68
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;
SQ
Query Match 96.5%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
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RESULT 15
Q5TCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC Q5TCY9;
DT 01-FEB-2005 (TRENBLrel. 29, Created)
DT 01-FEB-2005 (TRENBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TRENBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 96.5%; Score 137; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152
Search completed: January 25, 2006, 15:18:39
Job time : 76 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-5
Perfect score: 142
Sequence: 1 HSDAVFTRNYYRLRKQMAVKVYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*
1: Geneseq1990s:*
2: Geneseq1990s:*
3: Geneseq2000s:*
4: Geneseq2001s:*
5: Geneseq2002s:*
6: Geneseq2003as:*
7: Geneseq2003bs:*
8: Geneseq2004s:*
9: Geneseq2005s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	138	97.2	28	5	ABG94141 Human vas
2	137	96.5	28	5	ABG94140 Human vas
3	136	95.8	28	5	ABG94138 Human vas
4	136	95.8	28	5	ABG94139 Human vas
5	135	95.1	28	1	AAP10172 VIP. 3/20
6	135	95.1	28	1	AAP1039 Sequence
7	135	95.1	28	2	AAR34943 Porcine v
8	135	95.1	28	2	AAR40272 Native VI
9	135	95.1	28	2	AAR53111 Bronchodi
10	135	95.1	28	2	AAR53109 Bronchodi
11	135	95.1	28	2	AAR53110 Bronchodi
12	135	95.1	28	2	AAR87092 Vasoactiv
13	135	95.1	28	2	AAR83785 VIP. 2/19
14	135	95.1	28	2	AAR97810 Vasoactiv
15	135	95.1	28	2	AAR93023 Human glu
16	135	95.1	28	2	AAW65188 Vasoactiv
17	135	95.1	28	2	AAW06120 Human VIP
18	135	95.1	28	2	AAW06119 Mouse VIP
19	135	95.1	28	2	AAW06114 Rabbit VI
20	135	95.1	28	2	AAW06113 Macaque V
21	135	95.1	28	2	AAW06121 Pig VIP p
22	135	95.1	28	2	AAW06122 Goat VIP
23	135	95.1	28	2	AAW06115 Dog VIP p
24	135	95.1	28	2	AAW06112 Sheep VIP

ALIGNMENTS

RESULT 1					
ABG94141					
ID	ABG94141	standard; peptide; 28 AA.			
XX	AC	ABG94141;			
XX	DT	27-NOV-2002 (first entry)			
XX	DE	Human vasoactive intestinal polypeptide (VIP) analogue #189.			
KW	Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;				
KW	vagina; vaginal atrophy; pain; intercourse; vaginal itching;				
KW	vaginal dryness; sexual desire enhancement; female genitalia; frigidity;				
KW	sexual aversion; menopausal state; post-menopausal state; sexual desire;				
KW	sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;				
KW	peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;				
KW	vaginal muscle tone; vaginal lubrication; collagen misdeposition.				
XX	OS	Unidentified.			
XX	PN	US2002099003-A1.			
XX	PD	25-JUL-2002.			
XX	PF	13-AUG-2001; 2001US-00929818.			
XX	PR	28-OCT-1997; 97US-00959057.			
PR	28-OCT-1997;	97US-00959064.			
PR	27-OCT-1998;	98US-00181316.			
PR	04-FEB-2000;	2000US-00498522.			
XX	(WILS/) WILSON L F.				
PA	(PLAC/) PLACE V A.				
XX	Wilson LF, Place VA;				
XX	WPI; 2002-697729/75.				
PT	Treating sexual dysfunction in females comprises administering vasoactive				
PT	intestinal polypeptide or against to vagina and/or vulvar region.				
XX	Claim 19; Page; 19pp; English.				
XX	The invention relates to a method for treating sexual dysfunction in				
CC	females comprising administering a formulation comprising a vasoactive				
CC	agent comprising a vasoactive intestinal polypeptide and/or agonist to				
CC	the vagina and/or vulvar region. The method is used for preventing				

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;
 SQ Query Match 97.2%; Score 138; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 4.8e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28

RESULT 2
 ABG94140
 ID ABG94140 standard; peptide; 28 AA.
 XX AC ABG94140;
 XX DT 27-NOV-2002 (first entry)
 XX DE Human vasoactive intestinal polypeptide (VIP) analogue #188.

XX Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 XX OS
 XX PN US2002099003-A1.
 XX PD 25-JUL-2002.
 XX PF 13-AUG-2001; 2001US-00929818.

XX 28-OCT-1997; 97US-00959057.
 XX PR 28-OCT-1997; 97US-00959064.
 XX PR 27-OCT-1998; 98US-00181316.
 XX PR 04-FEB-2000; 2000US-00498522.

XX (WILSON) WILSON L F.
 XX (PLAC) PLACE V A.
 XX PI Wilson LF, Place VA;
 XX FI
 XX DR WPI; 2002-697729/75.

XX Treating sexual dysfunction in females comprises administering vasoactive
 XX intestinal polypeptide or against to vagina and/or vulvar region.
 XX Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952

XX Sequence 28 AA;
 SQ Query Match 96.5%; Score 137; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 6.5e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTNNYTRLRKQMAVKKYLNSILN 28

RESULT 3
 ABG94138
 ID ABG94138 standard; peptide; 28 AA.
 XX AC ABG94138;
 XX DT 27-NOV-2002 (first entry)
 XX DE Human vasoactive intestinal polypeptide (VIP) analogue #186.

XX Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 XX OS
 XX PN US2002099003-A1.
 XX PD 25-JUL-2002.
 XX PF 13-AUG-2001; 2001US-00929818.

XX 28-OCT-1997; 97US-00959057.
 XX PR 28-OCT-1997; 97US-00959064.
 XX PR 27-OCT-1998; 98US-00181316.
 XX PR 04-FEB-2000; 2000US-00498522.

XX (WILSON) WILSON L F.
 XX (PLAC) PLACE V A.
 XX PI Wilson LF, Place VA;
 XX FI
 XX DR WPI; 2002-697729/75.

XX Treating sexual dysfunction in females comprises administering vasoactive
 XX intestinal polypeptide or against to vagina and/or vulvar region.
 XX Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive

agent comprising a vasoactive intestinal polypeptide and/or agonist to the vagina and/or vulvar region. The method is used for preventing vaginal atrophy and pain during intercourse, for treating vaginal itching and dryness, for enhancing sexual desire and responsiveness in females and for maintaining improvement of the tissue health of the female genitalia. The method is also used for treating persistent or recurrent deficiency or absence of sexual fantasies and desire for sexual activity, frigidity, sexual aversion, menopausal or post-menopausal state, multiple sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy, diabetes mellitus, substance-induced decreases in sexual desire and responsiveness and primary and secondary anorgasmia. The formulation improves vaginal muscle tone and tissue health, increases vaginal lubrication and minimises collagen misdeposition resulting from hypoxia. This sequence represents a human vasoactive intestinal polypeptide (VIP) analogue with agonist and/or antagonist activity. Note: The present sequence is not featured in the printed specification but was derived from the wild-type peptide shown in ABG93952

Sequence 28 AA;

```
Query Match          95.8%; Score 136; DB 5; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.8e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
|||
Db 1 HSDAVFTTNYTRLRKQMAVKKYLNSILN 28

RESULT 4
ABG94139
ID ABG94139 standard; peptide: 28 AA.

AC ABG94139;
XX
DT 27-NOV-2002 (first entry)

DE Human vasoactive intestinal polypeptide (VIP) analogue #187.

KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

Unidentified.

PN US2002099003-A1.

25-JUL-2002.

AA
PF 13-AUG-2001; 2001US-00929818.

PR 28-OCT-1997: 97US-00959057.

PR	28-OCT-1997;	97US-00959064;
PR	27-OCT-1998;	98US-00181316;

PR 04-FEB-2000; 2000US-00498522.
XX

PA (WILS//) WILSON L F
PA (PLAC//) PLACE V A

XX
PI Wilson L.F. Place VA:XX
DR
WPI: 2002-697729/75.

XX Treating sexual dysfunction in females comprises administering vasoactive
PT intestinal polypeptide or against to vagina and/or vulvar region.

PS Claim 19; Page: 19pp; English.

CC The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC the vagina and/or vulvar region. The method is used for preventing
CC vaginal atrophy and pain during intercourse, for treating vaginal itching
CC and dryness, for enhancing sexual desire and responsiveness in females
CC and for maintaining improvement of the tissue health of the female
CC genitalia. The method is also used for treating persistent or recurrent
CC deficiency or absence of sexual fantasies and desire for sexual activity,
CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
CC diabetes mellitus, substance-induced decreases in sexual desire and
CC responsiveness and primary and secondary anorgasmia. The formulation
CC improves vaginal muscle tone and tissue health, increases vaginal
CC lubrication and minimises collagen misdeposition resulting from hypoxia.
CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
CC analogue with agonist and/or antagonist activity. Note: The present
CC sequence is not featured in the printed specification but was derived
CC from the wild-type peptide shown in AB939352

Sequence 28 AA;

Query Match 95.8%; Score 136; DB 5; Length 28;
Best Local Similarity 96.4%; Pred.No. 8.8e-11;
Matches 27; Conservative 0; Mismatches 1; Indels

Qy 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
|||||

RESULT 5
AAP10172
ID AAP10172 standard; peptide: 28 AA.

XX	
AC	
XX	AAP10172;
DT	25-MAR-2003 (revised)
DT	21-DEC-1992 (first entry)

XX DE VIP.

XX Vasoactive intestinal polypeptide;
KW allergic asthma. Chemical mediator
KW isolation-inhibiting action.

XX
OS
Homo sapiens.

XX
PN JP56128721-A.XX
PD
08-OCT-1981.XX
DE
12-MAR-1980-

12-MAR-1980 00:00:00

XX
PAGE 1 FIGHT CO LTDXX
WDT. 1001-860530/47

XX

PT active against e.g. bronchial asthma and hay fever.

PS claim 1: page 1: 3pp: Japanese.

The sequence given can be used as the active component in an anti-allergic agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator isolation-inhibiting action and is effective for therapy and prevention of various allergic diseases, such as allergic rhinitis, bronchial asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis, etc. Since it also has specific bronchial smooth muscle relaxant action, it is especially useful for treating and preventing bronchial and allergic asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PA field.)

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us-10-626-719-5.rag

```
SQ Sequence 28 AA;
Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||

RESULT 6
AAP71039
ID AAP71039 standard; peptide; 28 AA.
XX
AC AAP71039;
XX
XX 03-OCT-2002 (revised)
DT 05-APR-1991 (first entry)
XX
XX Sequence of active ingredient in hair growth promoting compn.
XX
XX Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
KW hair growth promoter.
XX
XX Synthetic.
XX
XX EP225639-A.
XX
XX 16-JUN-1987.
XX
XX 10-DEC-1986; 86EP-00117190.
XX
XX 10-DEC-1985; 85JP-00276099.
XX
XX (MEIJ ) MEIJ SEIKA KAISHA.
XX
XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;
PI
XX WPI; 1987-164873/24.
XX
XX Hair growth promoting compns. - contg. vasoactive intestinal polypeptide
PT and carrier.
XX
XX Claim 1; Page 8; 10pp; English.
XX
XX When applied to the skin, the peptide causes a local increase in blood
CC flow and promotes hair growth. It is the natural peptide known as
CC vasoactive intestinal polypeptide which has been isolated from the
CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
XX
XX Sequence 28 AA;
Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||

RESULT 7
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX
AC AAR34943;
XX
XX 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX
XX Porcine VIP.
DE
XX

KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
KW bronchiotracheal constrictive disorders.
XX
XX Sus scrofa.
XX
XX EP536741-A2.
XX
XX 14-APR-1993.
XX
XX 08-OCT-1992; 92EP-00117185.
XX
XX 11-OCT-1991; 91US-00773747.
XX
XX (HOFF ) HOFFMANN LA ROCHE & CO AG F.
PA
XX Bolin DR, Odonnell M;
PI
XX WPI; 1993-118996/15.
XX
XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchotracheal constructive disorders e.g. asthma.
XX
XX Disclosure; Page 65; 141pp; English.
XX
XX The sequence is that of porcine vasoactive intestinal peptide (VIP) as
CC claimed in EP-325044. The peptide sequence was used to design cyclic
CC analogues of VIP which have enhanced bronchodilation activity without any
CC observable side effects such as cardiovascular side effects. The
CC bronchodilation produced by the analogues can be sustained for more than
CC two hours. The analogues may be used for the treatment of bronchotracheal
CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
CC -MAR-2003 to correct PN field.)
XX
XX Sequence 28 AA;
Query Match 95.1%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.2e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||

RESULT 8
AAR40272
ID AAR40272 standard; protein; 28 AA.
XX
AC AAR40272;
XX
XX 25-MAR-2003 (revised)
DT 09-FEB-1994 (first entry)
XX
XX Native VIP.
DE
XX Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
KW side effect; bronchoconstrictive disorder; asthma.
XX
XX Sus scrofa.
XX
XX Key Location/Qualifiers
FH Modified-site 28
FT /note= "C-terminal is amidated"
FT
XX
XX US5234907-A.
XX
XX 10-AUG-1993.
XX
XX 24-APR-1991; 91US-00690300.
XX
XX 30-JUN-1989; 89US-00374503.
XX
XX (HOFF ) HOFFMANN LA ROCHE INC.
PA
```

CC	capable of bonding to the amino acid at the carboxy terminal through a
CC	carboxyl group and fixing the peptide chain during the synthesis
XX	
SQ	Sequence 28 AA;
	Query Match 95.1%; Score 135; DB 2; Length 28;
	Best Local Similarity 96.4%; Pred. NO. 1.2e-10;
	Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
DB	1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 10	
AARS3109	
ID	AARS3109 standard; peptide; 28 AA.
XX	
AC	AAR53109;
XX	
DT	20-DEC-1994 (first entry)
XX	
DE	Bronchodilator peptide #19.
XX	
KW	Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW	selectively; toxicity; mammal; bronchodilator.
XX	
OS	Synthetic.
XX	
FH	Key Location/Qualifiers
FT	Misc-difference 10 /note= "D-form residue"
FT	Modified-site 28 /note= "Amidated C-terminal"
FT	
XX	
PN	JP06092991-A.
XX	
PD	05-APR-1994.
XX	
PF	28-FEB-1991; 9LJP-00034335.
XX	
PR	28-FEB-1991; 9LJP-00034335.
XX	
PA	(DAI) DAICEL CHEM IND LTD.
PA	(MEIJ) MEIJI SEIKA KAISHA.
XX	
DR	WFI; 1994-147946/18.
XX	
PT	Active peptide(s), having smooth muscle relaxing activity - useful as
PT	bronchodilators.
XX	
PS	Disclosure; Page 5; 29pp; Japanese.
XX	
CC	The sequences given in AAR53091-111 are synthetic peptides based on
CC	vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC	the smooth muscle selectively and are only low toxic-non- toxic to
CC	mammals. These peptides may be used as bronchodilators. They are prepared
CC	by solid phase synthesis using a resin having an amino functional group
CC	capable of bonding to the amino acid at the carboxy terminal through a
CC	carboxyl group and fixing the peptide chain during the synthesis
XX	
SQ	Sequence 28 AA;
	Query Match 95.1%; Score 135; DB 2; Length 28;
	Best Local Similarity 96.4%; Pred. NO. 1.2e-10;
	Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY	1 HSDAVFTNRYTRLRKQMAVKKYLNSILN 28
DB	1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 11	

AAR53110
 ID AAR53110 standard; peptide; 28 AA.
 XX AC AAR53110;
 XX DT 20-DEC-1994 (first entry)
 XX DE Bronchodilator peptide #20.
 XX KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 XX KW selectively; toxicity; mammal; bronchodilator.
 XX OS Synthetic.
 XX FH Key Location/Qualifiers
 FT Misc-difference 22
 FT /note= "D-form residue"
 FT Modified-site 28
 FT /note= "Amidated C-terminal"
 XX JF06092991-A.
 XX 05-APR-1994.
 XX 28-FEB-1991; 91JP-00034335.
 XX 28-FEB-1991; 91JP-00034335.
 XX (DAIL) DAICEL CHEM IND LTD.
 XX (MEIJ) MEIJI SEIKA KAISHA.
 XX WPI; 1994-147946/18.
 XX Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.
 XX Disclosure; Page 5; 29pp; Japanese.
 XX The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a
 CC carboxyl group and fixing the peptide chain during the synthesis
 XX SQ Sequence 28 AA;
 Query Match 95.1%; Score 135; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.2e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
 RESULT 12
 AAR87092
 ID AAR87092 standard; peptide; 28 AA.
 XX AC AAR87092;
 XX DT 06-JUN-1996 (first entry)
 XX DE Vasoactive intestinal peptide, forms part of gene transfer complex.
 XX KW Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
 XX KW gene therapy; vaccine.
 XX OS Sus scrofa.
 XX FH Key Location/Qualifiers

FT Modified-site 28
 FT /note= "amidated"
 XX FR2719316-A1.
 XX 03-NOV-1995.
 XX 28-APR-1994; 94FR-00005174.
 XX 28-APR-1994; 94FR-00005174.
 XX (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
 XX Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
 DR WPI; 1995-375617/49.
 XX New nucleic acid complexes with cationic polymers - useful for genetic
 PT transformation of cells.
 XX Claim 11; Page 43; 58pp; French.
 CC In novel complexes of negatively-charged nucleic acids and positively-
 CC charged polymers, the polymers comprise monomer subunits bearing NH3+
 CC groups, at least 10% of which are replaced by uncharged amino groups
 CC bearing a substit. that has at least one -OH group and is not recognised
 CC by cell membrane receptors; the side-chain groups of the polymer (i.e.
 CC the NH3+ and/or OH groups) may be substd. by a group that is recognised
 CC by a cell membrane receptor, provided that at least 30% of the NH3+
 CC groups remain free. The complexes are useful for transfecting particular
 CC nucleic acid sequences into particular cell types, depending on the
 CC identity of the cell membrane receptor ligands involved, e.g. for gene
 CC therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
 CC antigens recognised by lectins, natural metabolites (such as biotin,
 CC tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
 CC intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
 CC peptide hormones such as alpha-MSH, chemotactic factors and integrin
 CC ligands)
 XX Sequence 28 AA;
 Query Match 95.1%; Score 135; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.2e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
 RESULT 13
 AAR83785
 ID AAR83785 standard; peptide; 28 AA.
 XX AC AAR83785;
 XX DT 27-FEB-1996 (first entry)
 XX DE VIP.
 XX KW VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
 XX KW secretin; nervous system; digestive system; smooth muscle; relaxant;
 XX KW bronchial asthma; impotence; therapy.
 XX OS Sus scrofa.
 XX FH Key Location/Qualifiers
 FT Misc-difference 29
 FT /note= "amidated"
 XX EP663406-A1.
 XX 19-JUL-1995.

XX 19-DEC-1994; 94EP-00120126.
 XX
 XX 20-DEC-1993; 93JP-00319815.
 XX
 XX (SANWA) SANWA KAGAKU KENKYUSHO CO.
 XX
 XX Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
 XX WPI; 1995-247502/33.
 XX
 XX New modified form of vasoactive intestinal polypeptide - with C-terminal
 XX substd. amide residue, has greater in vivo stability and persistence,
 XX useful for treating asthma and impotence.
 XX
 XX Disclosure; Page 3; 16pp; English.
 XX
 XX This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
 XX a peptide hormone that shows smooth muscle relaxant activity. The
 XX structure of VIP is similar to that of the other peptides in the glucagon
 XX -secretin family, to which it belongs. VIP is present in the nervous
 XX system and the digestive system tracts. It is also found in the lungs of
 XX normal patients (however, it is not found in the lungs of people
 XX suffering from bronchial asthma). The sequences shown in AAR83784 and
 XX AAR83786 are analogues of this sequence. These analogues are found to be
 XX resistant to protease digestion. The analogues can be used to treat
 XX asthma (by inhalation) and impotence (percutaneously). Compared to
 XX natural VIP, the analogue sequences have better in vivo stability. The
 XX analogue sequences are also more persistent than natural VIP and have
 XX excellent affinity for biological membranes
 XX
 XX Sequence 28 AA;
 Query Match 95.1%; Score 135; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. NO. 1.2e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 14
 AAR97810
 ID AAR97810 standard; peptide; 28 AA.
 AC AAR97810;
 XX
 DT 22-AUG-1996 (first entry)
 XX
 DE Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
 XX
 XX Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
 XX burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
 XX
 XX Synthetic.
 OS
 XX Key Location/Qualifiers
 FH Cleavage-site 28
 FT Modified-site 28
 FT /note= "amidated"
 XX
 XX JF08040926-A.
 XX
 XX 13-FEB-1996.
 XX
 XX 03-AUG-1994; 94JP-00182457.
 XX
 XX 03-AUG-1994; 94JP-00182457.
 XX
 XX (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
 XX
 XX WPI; 1996-157021/16.
 XX

PT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
 PT active component.
 XX
 XX Claim 1; Page 2; 4pp; Japanese.
 XX
 XX Vasoactive intestinal peptide and related compounds are known to have
 XX strong vasodilatory activity. They have now been found to be effective in
 XX the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
 XX diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
 XX novel skin ulcer remedy
 XX
 XX Sequence 28 AA;
 Query Match 95.1%; Score 135; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. NO. 1.2e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 OY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
 DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 15
 AAR93023
 ID AAR93023 standard; protein; 28 AA.
 AC AAR93023;
 XX
 DT 09-AUG-1996 (first entry)
 XX
 DE Human glucagon degrading enzyme - VIP substrate.
 XX
 XX Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
 KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
 KW amplification; polymerase chain reaction; probe; expression vector;
 KW eukaryote; SV40 promoter; COS-7.
 XX
 XX Synthetic.
 OS
 XX Key Location/Qualifiers
 FH Cleavage-site 17..18
 FT Modified-site 28
 FT /note= "contains C-terminal amide group"
 XX
 XX JF08023972-A.
 XX
 XX 30-JAN-1996.
 XX
 XX 19-JUL-1994; 94JP-00187936.
 XX
 XX 19-JUL-1994; 94JP-00187936.
 XX
 XX (SUNR) SUNTORY LTD.
 XX
 XX WPI; 1996-133414/14.
 XX
 XX New glucagon decomposing enzyme, and DNA encoding it - for specifically
 PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
 PT and treatment of diseases caused by excess glucagon and VIP.
 XX
 XX Claim 1; Page 2; 18pp; Japanese.
 XX
 XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
 CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
 CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
 CC cleavage of glucagon, vasoactive intestinal peptide and selectin
 CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
 CC library with an anti-GDE peptide antibody, amplifying the inserts with
 CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
 CC This screening resulted in the full length clone designated lambda GDE4-
 CC 2. The coding region of the clone was subsequently PCR amplified by the
 CC primers AAT11576-7 and inserted into the eukaryotic expression vector
 CC pKDCR under control of the SV40 promoter for production of the protein in

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CC COS-7 cells. The protein is useful in preventing and treating diseases
 CC characterised by an excess of glucagon or vasoactive intestinal peptide

XX
 SQ Sequence 28 AA;

Query Match 95.1%; Score 135; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.2e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTRLRKQMAVKYILN 28
 ||||| ||||| ||||| ||||| |||||
 Db 1 HSDAVFTDNYTRLRKQMAVKYILN 28

Search completed: January 25, 2006, 15:08:20
 Job time : 77.875 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-5
Perfect score: 142
Sequence: 1 HSDAVFTRNYRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA:*
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3: /cgn2_6/ptodata/1/iaa/H_COMB.pep.*
4: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep.*
5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep.*
6: /cgn2_6/ptodata/1/iaa/backfiles.pep.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	142	100.0	28	US-09-528-200-5	Sequence 5, Appli
2	139	97.9	28	US-09-528-200-3	Sequence 3, Appli
3	138	97.2	28	US-09-528-200-4	Sequence 4, Appli
4	135	95.1	28	US-07-690-3008-1	Sequence 1, Appli
5	135	95.1	28	US-07-676-987A-1	Sequence 1, Appli
6	135	95.1	28	US-07-868-906-1	Sequence 1, Appli
7	135	95.1	28	US-08-201-092-1	Sequence 1, Appli
8	135	95.1	28	US-07-924-054-11	Sequence 11, Appli
9	135	95.1	28	US-08-243-082-1	Sequence 1, Appli
10	135	95.1	28	US-08-361-443-1	Sequence 1, Appli
11	135	95.1	28	US-08-288-681A-1	Sequence 1, Appli
12	135	95.1	28	US-07-776-272-26	Sequence 26, Appli
13	135	95.1	28	US-08-308-729-1	Sequence 1, Appli
14	135	95.1	28	US-08-062-472B-40	Sequence 40, Appli
15	135	95.1	28	US-08-171-701A-1	Sequence 1, Appli
16	135	95.1	28	US-08-741-678-1	Sequence 1, Appli
17	135	95.1	28	US-08-519-180-2	Sequence 2, Appli
18	135	95.1	28	US-08-414-424-1	Sequence 1, Appli
19	135	95.1	28	US-08-413-708B-1	Sequence 1, Appli
20	135	95.1	28	US-08-818-253-37	Sequence 37, Appli
21	135	95.1	28	US-08-897-624-1	Sequence 1, Appli
22	135	95.1	28	US-08-930-845-1	Sequence 1, Appli
23	135	95.1	28	US-08-952-568-3	Sequence 3, Appli
24	135	95.1	28	US-08-952-568-4	Sequence 4, Appli
25	135	95.1	28	US-08-952-568-5	Sequence 5, Appli
26	135	95.1	28	US-08-952-568-6	Sequence 6, Appli
27	135	95.1	28	US-08-952-568-10	Sequence 10, Appli

28	135	95.1	28	US-08-952-568-11	Sequence 11, Appli
29	135	95.1	28	US-08-952-568-12	Sequence 12, Appli
30	135	95.1	28	US-08-952-568-13	Sequence 13, Appli
31	135	95.1	28	US-09-192-048-21	Sequence 21, Appli
32	135	95.1	28	US-08-893-749-2	Sequence 2, Appli
33	135	95.1	28	US-08-818-252-37	Sequence 37, Appli
34	135	95.1	28	US-09-260-846-16	Sequence 16, Appli
35	135	95.1	28	US-08-842-322-31	Sequence 31, Appli
36	135	95.1	28	US-09-333-842-1	Sequence 1, Appli
37	135	95.1	28	US-09-446-352B-1	Sequence 1, Appli
38	135	95.1	28	US-09-316-919-53	Sequence 53, Appli
39	135	95.1	28	US-09-630-335-1	Sequence 1, Appli
40	135	95.1	28	US-09-629-632A-1	Sequence 1, Appli
41	135	95.1	28	US-09-528-200-196	Sequence 196, App
42	135	95.1	28	US-09-316-920A-53	Sequence 53, Appli
43	135	95.1	28	US-09-646-046-1	Sequence 1, Appli
44	135	95.1	28	US-09-285-422-1	Sequence 1, Appli
45	135	95.1	28	US-10-100-256B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURES:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-5

Query Match 100.0%; Score 142; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 2e-13;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYRLRKQMAVKYLSILN 28
Db 1 HSDAVFTRNYRLRKQMAVKYLSILN 28

RESULT 2
US-09-528-200-3
; Sequence 3, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN

```
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
; US-09-528-200-3

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 5,4e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARSTEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; TITLE OF INVENTION: FOR OPTICAL DIAGNOSIS
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
; US-09-528-200-4

Query Match          97.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7,4e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTLRKQMAVKKYLNSILN 28

RESULT 4
US-07-690-300B-1
; Sequence 1, Application US/07690300B
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; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; US-07-690-300B-1

Query Match          95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTRNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 5
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FTGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON
; STATE: D. C.
; COUNTRY: U.S.
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
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, APPLICATION NUMBER: JP 3-90671
, FILING DATE: 23-APR-1991
, ATTORNEY/AGENT INFORMATION:
, NAME: Oram Jr., George E.
, REGISTRATION NUMBER: 27,931
, REFERENCE/DOCKET NUMBER: 920238N
, TELECOMMUNICATION INFORMATION:
, TELEPHONE: (202) 659-2930
, TELEFAX: (202) 887-0357
, TELEX: 440142
, INFORMATION FOR SEQ ID NO: 1:
, SEQUENCE CHARACTERISTICS:
, LENGTH: 28 amino acids

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Query Match 95.1%; Score 135; DB 1; Length 28;

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Best Local Similarity 96.4%; Pred. No. 2e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 8
US-07-924-054-11
; Sequence 11, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS: 11
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; ADDRESS: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S.
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-924-054-11

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 9
US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
```

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QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

RESULT 10
US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tautomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/361,443
; FILING DATE:
; CLASSIFICATION: 530
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;; PRIOR APPLICATION DATA:
;; APPLICATION NUMBER: JP Hei. 5-319815
;; FILING DATE: 20-DEC-1993
;; INFORMATION FOR SEQ ID NO: 1:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 28 amino acids
;; TYPE: amino acid
;; STRANDEDNESS: single
;; TOPOLOGY: linear
;; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 11
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288,681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 12
US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshii
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/776,272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E
; REGISTRATION NUMBER: 31,409
; REFERENCE/DOCKET NUMBER: P-450-23167
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-0400
; TELEFAX: 202-887-0605
; TELEX: 440706
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: YES
US-07-776-272-26

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNTYTLRKQMAVKKYLNSILN 28

RESULT 13
US-08-308-729-1
; Sequence 1, Application US/08308729
; Patent No. 5677419
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Cyclic Vasoactive Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 73
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/308,729
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/153,530
; FILING DATE:
; APPLICATION NUMBER: US 07/773,747
; FILING DATE: 11-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8322
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; PUBLICATION INFORMATION:
; DOCUMENT NUMBER: EP 325 044 A A
; FILING DATE: 22-DEC-1987
; PUBLICATION DATE: 26-JUL-1989
; RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
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; US-08-308-729-1
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; Query Match 95.1%; Score 135; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 2e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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; Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; RESULT 14
; US-08-062-472B-40
; Sequence 40, Application US/08062472B
; Patent No. 5695954
; GENERAL INFORMATION:
; APPLICANT: Sherwood, Nancy G M
; APPLICANT: Parker, David B
; APPLICANT: McRory, John E
; APPLICANT: Lescheid, David W
; TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
; ADDRESS: WHINSTON, LLP
; STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
; CITY: PORTLAND
; STATE: OREGON
; COUNTRY: USA
; ZIP: 97204-2988
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
;
; APPLICATION NUMBER: US/08/062,472B
; FILING DATE: 14-MAY-1993
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: POLLEY, RICHARD J
; REGISTRATION NUMBER: 28107
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (503) 226-7391
; TELEFAX: (503) 228-9446
; INFORMATION FOR SEQ ID NO: 40:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
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; US-08-062-472B-40
;
; Query Match 95.1%; Score 135; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 2e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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; Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; RESULT 15
; US-08-171-701A-1
; Sequence 1, Application US/08171701A
; Patent No. 5721211
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
; TITLE OF INVENTION: TREATING SMALL CELL AND NONSMALL
; TITLE OF INVENTION: CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 3
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3+ Floppy Disk
; COMPUTER: IBM PC Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: WordPerfect, Version 5.1 Plus
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/171,701A
; FILING DATE: December 22, 1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 Amino Acids
; TYPE: Amino Acid
; TOPOLOGY: Linear
; MOLECULE TYPE: Peptide
; FRAGMENT TYPE: N-terminal
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 1
; OTHER INFORMATION:
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 28
; OTHER INFORMATION:
;
; US-08-171-701A-1
;
; Query Match 95.1%; Score 135; DB 1; Length 28;
; Best Local Similarity 96.4%; Pred. No. 2e-12;
; Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
;
; Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
; Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
;
; Search completed: January 25, 2006, 15:23:44
; Job time : 22.875 secs

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Result No.	Score	Query		DB	ID	Description
		Match	%			
1	138	97.2	28	3	US-09-929-818-190	Sequence 190, Appl
2	137	96.5	28	3	US-09-929-818-189	Sequence 189, Appl
3	136	95.8	28	3	US-09-929-818-187	Sequence 187, Appl
4	136	95.8	28	3	US-09-929-818-188	Sequence 188, Appl
5	135	95.1	28	3	US-09-929-818-1	Sequence 1, Appl
6	135	95.1	28	3	US-09-999-745-53	Sequence 53, Appl
7	135	95.1	28	3	US-09-554-000-37	Sequence 37, Appl
8	135	95.1	28	4	US-10-090-109A-1	Sequence 1, Appl
9	135	95.1	28	4	US-10-044-722-8	Sequence 8, Appl
10	135	95.1	28	4	US-10-004-530A-17	Sequence 17, Appl
11	135	95.1	28	4	US-10-114-716A-3	Sequence 3, Appl
12	135	95.1	28	4	US-10-211-994-1	Sequence 1, Appl
13	135	95.1	28	4	US-10-197-954-145	Sequence 145, Appl
14	135	95.1	28	4	US-10-100-256B-1	Sequence 1, Appl
15	135	95.1	28	4	US-10-254-569A-1	Sequence 1, Appl
16	135	95.1	28	4	US-10-201-288-31	Sequence 31, Appl
17	135	95.1	28	4	US-10-343-654-22	Sequence 22, Appl
18	135	95.1	28	4	US-10-416-822-1	Sequence 1, Appl
19	135	95.1	28	4	US-10-467-059-14	Sequence 14, Appl
20	135	95.1	28	5	US-10-494-634-7	Sequence 7, Appl
21	135	95.1	28	5	US-10-718-071-36	Sequence 36, Appl
22	135	95.1	28	5	US-10-788-563-17	Sequence 17, Appl
23	135	95.1	28	5	US-10-760-085-145	Sequence 145, Appl
24	135	95.1	28	5	US-10-892-981A-1	Sequence 1, Appl
25	135	95.1	28	5	US-10-769-803-2	Sequence 2, Appl
26	135	95.1	28	5	US-10-919-325-32	Sequence 32, Appl
27	135	95.1	28	5	US-10-898-143-1	Sequence 1, Appl

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; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; PRIOR FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 189
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-189

Query Match          96.5%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-187

Query Match          95.8%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-188
; Sequence 188, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 188
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
US-09-929-818-188

Query Match          95.8%; Score 136; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

RESULT 5
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match          95.1%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFDNYTRLRKQMAVKKYLNSILN 28

RESULT 6
US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baird, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-05-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

Query Match 95.1%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFDNYTRLRKQMAVKKYLNSILN 28

RESULT 7
US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; TITLE OF INVENTION: DETECTION OF ANALYTES
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match 95.1%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 1 HSDAVFDNYTRLRKQMAVKKYLNSILN 28

RESULT 8
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151456A1
; GENERAL INFORMATION:
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; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; FILE REFERENCE: VPAC1R, VPAC2R, and PAC1R Agonists
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 1 HSDAVFDNYTRLRKQMAVKKYLNSILN 28

RESULT 9
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DICICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match 95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| |||||||
Db 1 HSDAVFDNYTRLRKQMAVKKYLNSILN 28

RESULT 10
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
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Wed Feb 8 17:49:07 2006

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; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: Patent in version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

Query Match          95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K'ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

Query Match          95.1%; Score 135; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.5e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar

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Search completed: January 25, 2006, 15:31:04
Job time : 53.625 sec8

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; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match          95.1%; Score 135; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
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RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11/175,690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          95.1%; Score 135; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 5.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 25 HSDAVFTDNYTLRKQMAVKKYLNSILN 52
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US-11-175-690-240
; Sequence 240, Application US/11/175,690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
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Db 1 HSDAVFTDNTYRLRKQMAVKYLSILN 28

RESULT 3

VRBO

N;Contains: intestinal peptide precursor - bovine (fragments)
 C;Species: Bos primigenius taurus (cattle)
 C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
 C;Accession: A61643; A61644; S09689
 R;Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A;Reference number: A61643; MUID:85027215; PMID:6548446
 A;Accession: A61643
 A;Molecule type: protein
 A;Residues: 1-27 <CAR>
 A;Cross-references: UNIPARC:UPI0000173515
 R;Carlquist, M.; Mutt, V.; Joernvall, H.
 FEBS Lett. 108, 457-460, 1979
 A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A;Reference number: A61644; MUID:80092152; PMID:520589
 A;Accession: A61644
 A;Molecule type: protein
 A;Residues: 28-55 <CA2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
 Biochim. Biophys. Acta 1038, 355-359, 1990
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: S09688; MUID:90254163; PMID:2340294
 A;Contents: annotation; comparison of mammalian PHI sequences
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.1%; Score 135; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.7e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Db 28 HSDAVFTDNTYTLRKQMAVKYLSILN 55

RESULT 4

VRBB

N;Contains: intestinal peptide precursor - rabbit (fragments)
 C;Species: Oryctolagus cuniculus (domestic rabbit)
 C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
 C;Accession: B60415; A60415
 R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
 Peptides 11, 123-128, 1990
 A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A;Reference number: A60415; MUID:90259845; PMID:2342988
 A;Accession: B60415
 A;Molecule type: protein
 A;Residues: 1-27 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB
 A;Accession: A60415
 A;Molecule type: protein
 A;Residues: 28-55 <GO2>
 A;Cross-references: UNIPARC:UPI00000351DB

C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.1%; Score 135; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.7e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Db 28 HSDAVFTDNTYTLRKQMAVKYLSILN 55

RESULT 5

VRSH

N;Contains: intestinal peptide precursor - sheep (fragments)
 C;Species: Ovis orientalis aries (domestic sheep)
 C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
 C;Accession: B60072; A60072; C61063; A43974
 R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: A60072; MUID:91239834; PMID:2034821
 A;Accession: B60072
 A;Molecule type: protein
 A;Residues: 1-27 <BOU>
 A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A;Accession: A60072
 A;Molecule type: protein
 A;Residues: 28-55 <BO2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
 A;Reference number: A61063; MUID:92245116; PMID:1574609
 A;Accession: C61063
 A;Molecule type: protein
 A;Residues: 28-55 <MIY>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: hypothalamus, intestine
 R;Gafvelin, G.

Peptides 11, 703-706, 1990
 A;Title: Isolation and primary structure of VIP from sheep brain.
 A;Reference number: A43974; MUID:91045331; PMID:2235680
 A;Accession: A43974
 A;Molecule type: protein
 A;Residues: 28-55 <GAP>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: brain

Query Match 95.1%; Score 135; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 7.7e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Db 28 HSDAVFTDNTYTLRKQMAVKYLSILN 55

RESULT 6

VRPG

N;Contains: intestinal peptide precursor - pig (fragments)
 C;Species: Sus scrofa domestica (domestic pig)
 C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
 C;Accession: A01549; A60300; A01550; J04017; A56754; S09690
 R;Tatemoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A;Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
 A;Molecule type: protein
 A;Residues: 1-27 <TA>
 A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
 R;Tatemoto, K.

Regul. Pept. 6, 330, 1983
 A;Title: PHI - a new brain-gut peptide.
 A;Reference number: A60300

A;Accession: A60300
 A;Molecule type: protein

A;Residues: 1-27 <TA2>
 A;Cross-references: UNIPARC:UPI00000351DB
 R;Mutt, V.; Said, S.I.

Eur. J. Biochem. 42, 581-589, 1974
 A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid

A;Reference number: A01550; MUID:74167323; PMID:4829446
 A;Accession: A01550

A;Molecule type: protein
 A;Residues: 28-55 <MT>

A;Cross-references: UNIPARC:UPI000002D1C0
 R;Gaivellin, G.; Andersson, M.; Dimoline, R.; Joernvall, H.; Mutt, V.

Peptides 9, 469-474, 1988
 A;Title: Isolation and characterization of a variant form of vasoactive intestinal poly

A;Reference number: JT0417; MUID:88335763; PMID:2843830
 A;Accession: JT0417

A;Molecule type: protein
 A;Residues: 28-58 <GAF>

A;Cross-references: UNIPARC:UPI000002B99A
 A;Note: this extended form is active in a VIP assay but is probably an incompletely proc

R;Bodanzky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
 J. Am. Chem. Soc. 96, 4973-4978, 1974

A;Reference number: A26231; MUID:74308014; PMID:4854585
 A;Contents: annotation

A;Note: a 28-residue peptide having the sequence and biological activities (in two assay
 R;Ichiki, Y.; Kitamura, K.; Kangawa, K.; Kawamoto, M.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
 A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)

A;Reference number: A56754; MUID:93038640; PMID:1329741
 A;Accession: A56754

A;Molecule type: protein
 A;Residues: 1-24 <ICH>

A;Cross-references: UNIPARC:UPI0000173514
 A;Experimental source: duodenum

A;Note: sequence extracted from NCBI backbone (NCBIP:114219)
 R;Buscall, L.; Cauvin, A.; Goulet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,

Biochim. Biophys. Acta 1038, 355-359, 1990
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide

A;Reference number: S09688; MUID:90254163; PMID:2340294
 A;Contents: annotation

A;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
 of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin

C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end; duplication; neuropeptide

F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;27/Modified site: amidated carboxyl end (ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (asn) (amide in mature form from following gly

Query Match 95.1%; Score 135; DB 1; Length 58;
 Best Local Similarity 96.4%; Pred. No. 8.1e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTNRYTLRKQMAVKKYLNSILN 55

RESULT 7

A60038

vasoactive intestinal peptide precursor - crab-eating macaque (fragment)
 C;Species: Macaca fascicularis (crab-eating macaque)

C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004

C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.

Brain Res. Mol. Brain Res. 9, 169-174, 1991

A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey a
 A;Reference number: A60038; MUID:91203476; PMID:1850073

A;Accession: A60038

A;Status: not compared with conceptual translation
 A;Molecule type: mRNA

A;Residues: 1-145 <BEN>

A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C
 C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

Query Match 95.1%; Score 135; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 2.1e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28

Db 100 HSDAVFTNRYTLRKQMAVKKYLNSILN 127

RESULT 8

VRHU

vasoactive intestinal peptide precursor [validated] - human
 N;Alternate names: VIP precursor

N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va
 C;Species: Homo sapiens (man)

C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004
 C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A01

R;Tatemoto, K.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
 DNA 4, 293-300, 1985

A;Title: Structure of the human vasoactive intestinal polypeptide gene.

A;Reference number: A90952; MUID:86004065; PMID:3899557
 A;Accession: A23296

A;Molecule type: DNA

A;Residues: 1-170 <TSU>

A;Cross-references: UNIPROT:P01282; UNIPARC:UPI0000038343; GB:M11553; NID:g340243; PIDN:
 R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983
 A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pep

A;Reference number: A93313; MUID:83271523; PMID:6571696
 A;Accession: A93313

A;Molecule type: mRNA

A;Residues: 1-170 <ITO>

A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA61
 E;Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1136-1141, 1987

A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage a
 A;Reference number: A60205; MUID:87140054; PMID:2434617

A;Accession: A60205

A;Molecule type: mRNA

A;Residues: 78-155 <GOZ>

A;Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:g340250; PIDN:AAA61
 R;Linder, S.; Barkhan, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnus

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987
 A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A;Reference number: A26361; MUID:87092456; PMID:3025882
 A;Accession: A26361

A;Molecule type: DNA

A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>
 A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:

A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue
 R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A;Title: Isolation, characterization, and pharmacological actions of peptide histidine v
 A;Reference number: A27419; MUID:88007645; PMID:3654650

A;Accession: A27419

A;Molecule type: protein

A;Residues: 81-122 <YIA>

A;Cross-references: UNIPARC:UPI00000351DE
 R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A;Title: Isolation and characterization of peptides which act on rat platelets, from a P
A;Reference number: JH0618; MUID:92287083; PMID:1318039
A;Accession: JH0618
A;Molecule type: protein
A;Residues: 125-152 <KIT>
A;Cross-references: UNIPARC:UPI000002D1C0
A;Experimental source: pheochromocytoma
R;Yamagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1998
A;Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A;Reference number: 151955; MUID:82627775; PMID:2839091
A;Accession: 151955
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-170 <RES>
A;Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:g340253; PIDN:AAA69515.1; PID:
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A;Reference number: 156494
A;Accession: 156494
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 78-155 <RE2>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:g340250; PIDN:AAA61285.1; PID:
R;Bloom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A;Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A;Reference number: 156988; MUID:84066682; PMID:6139527
A;Accession: 156988
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 50-170 <RE3>
A;Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:g340247; PIDN:AAA63268.1; PID:
C;Genetics:
A;Gene: GDB:VIP
A;Cross-references: GDB:120490; OMIM:192320
A;Map position: 6q26-q27
A;Introns: 36/2; 77/2; 112/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neuro
F;1-20/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F;81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F;125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F;68-133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152
RESULT 9
VRAT
vasoactive intestinal peptide precursor - rat
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
C;Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691
R;Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A;Title: The complete structure of the rat VIP gene.
A;Reference number: A60053; MUID:90244869; PMID:2159586
A;Accession: A60053
A;Molecule type: DNA
A;Residues: 1-170 <GIL>

A;Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A;Note: the authors translated the codon GAG for residue 67 as Gln
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Accession: B60037
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 78-155 <LAM>
A;Cross-references: UNIPARC:UPI0000173511
R;Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A;Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A;Reference number: A01548; MUID:85154612; PMID:3838518
A;Accession: A01548
A;Molecule type: mRNA
A;Residues: 9-170 <NIS>
A;Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:g57481; PIDN:CAA26200.1; PID:g
A;Experimental source: cerebral cortex
R;Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A;Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A;Reference number: A28102; MUID:88243784; PMID:3379062
A;Accession: A28102
A;Molecule type: protein
A;Residues: 134-152 <GOE>
A;Cross-references: UNIPARC:UPI00000351E4
A;Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Chris
Endocrinology 125, 1296-1302, 1989
A;Title: Peptide histidine isoleucinamide (PHI)-(1-27)-Gly as a new major form of PHI in
A;Reference number: A60586; MUID:89338237; PMID:2759027
A;Accession: A60586
A;Molecule type: protein
A;Residues: 81-108 <CAU>
A;Cross-references: UNIPARC:UPI0000173512
R;Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A;Title: Variable distribution of three molecular forms of peptide histidine isoleucinam
A;Reference number: A60587; MUID:90005222; PMID:2792003
A;Accession: A60587
A;Molecule type: protein
A;Residues: 81-122 <CA2>
A;Cross-references: UNIPARC:UPI0000173513
R;Buecail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht, P.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Comments: annotation; comparison of mammalian PHI sequences
C;Content: Two active peptides are released from the VIP precursor by cleavage at paired
C;Genetics:
A;Introns: 36/2; 77/2; 156/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-122/Product: PHI-42 #status experimental <PH42>
F;81-108/Product: PHI-27 #status experimental <PHIG>
F;81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F;107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F;133/Binding site: carboxylate (Asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMAVKYLSILN 152

RESULT 10
A60037
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; cortex; glycoprotein; hormone;
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Mus musculus (house mouse)
C:Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C:Accession: A60037; I49386
R:Laupert, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A:Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60037; MUID:91232388; PMID:1851524
A:Accession: A60037
A:Status: not compared with conceptual translation
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-170 <LAM>
A:Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R:Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A:Title: High conservation of upstream regulatory sequences on the human and mouse vasoa
A:Reference number: I49386; MUID:95201289; PMID:7894056
A:Accession: I49386
A:Status: preliminary; translated from GB/EMBL/DBDJ
A:Molecule type: DNA
A:Residues: 1-35 <RES>
A:Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:G95871; PIDN:CA52350.1; PI
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C:Genetics:
A:Gene: VIP
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F:1-21/Domain: signal sequence #status predicted <SIG>
F:81-107/Product: PHI-27 #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carbohydrate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl
Query Match 95.1%; Score 135; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. NO. 2.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTNTYTLRQMAVKKYLNSILN 28
DB 125 HSDAVFTNTYTLRQMAVKKYLNSILN 152
RESULT 11
VRGP
vasoactive intestinal peptide precursor - guinea pig (fragments)
N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C:Species: Cavia porcellus (guinea pig)
C:Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C:Accession: A26175; S09688; A57082; B60304
R:Du, B.H.; Eng, J.; Holmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985
A:Title: Guinea pig has a unique mammalian VIP.
A:Reference number: A26175; MUID:85225523; PMID:4004849
A:Accession: A26175
A:Molecule type: protein
A:Residues: 28-55 <DUB>
A:Cross-references: UNIPROT:P04566; UNIPARC:UPI0000035182
R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Accession: S09688
A:Molecule type: protein
A:Residues: 1-27 <BUS>
A:Cross-references: UNIPARC:UPI0000173516
A:Accession: A57082
A:Molecule type: protein
A:Residues: 28-55 <BU2>
A:Cross-references: UNIPARC:UPI0000173516

C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuro peptide; vasodi
F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental
Query Match 85.9%; Score 122; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. NO. 6e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTNTYTLRQMAVKKYLNSILN 28
DB 28 HSDALFTDTYTLRQMAVKKYLNSVLN 55
RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C:Species: Gallus gallus (chicken)
C:Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C:Accession: S47470; A91425; A90720; A01551
R:Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A:Description: Evidence for alternative splicing of the chicken VIP gene.
A:Reference number: S47470
A:Accession: S47470
A:Molecule type: mRNA
A:Residues: 1-165 <TAL>
A:Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PID
R:Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A:Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A:Reference number: A91425; MUID:76210823; PMID:1227973
A:Accession: A91425
A:Molecule type: protein
A:Residues: 94-121 <NIL>
A:Cross-references: UNIPARC:UPI00000351E1
R:Boodazsky, M.; Lin, C.Y.; Viotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A:Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A:Reference number: A90720
A:Contents: synthesis
A:Accession: A90720
A:Molecule type: protein
A:Residues: 107-121 <BOD>
A:Cross-references: UNIPARC:UPI0000173517
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; hormone; neuro peptide
F:1-25/Domain: signal sequence #status predicted <SIG>
F:94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F:121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl
Query Match 84.5%; Score 120; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. NO. 3.7e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTNTYTLRQMAVKKYLNSIL 27
DB 94 HSDAVFTNTYTLRQMAVKKYLNSVL 120
RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C:Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C:Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C:Accession: A60303; A60314; S07432
R:Dimaline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A:Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A:Reference number: A60303
A:Accession: A60303

A;Molecule type: protein
A;Residues: 1-28 <DIM>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI0000013884B
A;Note: this reference is an abstract
R;Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI000017662D
R;Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A;Reference number: S07432
A;Accession: S07432
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <DI3>
A;Cross-references: UNIPARC:UPI000013884B
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F;28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 83.8%; Score 119; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 8.2e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSIL 27
||||| :|:|||||:|:|
Db 1 HSDAVFTDNYSRIRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N/Alternate names: VIP
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C;Accession: A38232
R;Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A;Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A;Reference number: A38232; MUID:92179271; PMID:1542675
A;Accession: A38232
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-28 <ENG>
A;Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A;Note: sequence extracted from NCBI backbone (NCBIP:87215)
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 78.9%; Score 112; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 8.6e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
||||| :|:|||||:|:|
Db 1 HSDAVFTDSYTRLLKQMAVKKYLDSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C;Species: Gadus morhua (Atlantic cod)
C;Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C;Accession: JQ0361
R;Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A;Title: Isolation and characterisation of two teleost VIP's.
A;Reference number: JQ0361

A;Accession: JQ0361
A;Molecule type: protein
A;Residues: 1-25 <THW>
A;Cross-references: UNIPROT:P09684; UNIPARC:UPI00000138847
C;Superfamily: glucagon
C;Keywords: duplication; intestine; neuropeptide

Query Match 76.8%; Score 109; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 2.1e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 HSDAVFTNRYTLRKQMAVKKYLNS 25
||||| :|:|||||:|:|
Db 1 HSDAVFTDNYSRFRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 13.25 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-5

Perfect score: 142

Sequence: 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	135	95.1	28	VIP_CANFA	P63289 canis famil
2	135	95.1	28	VIP_CAPHI	P63290 capra hircu
3	135	95.1	28	VIP_MACMU	P84488 macaca mula
4	135	95.1	28	VIP_SHEEP	P63291 ovis aries
5	135	95.1	72	VIP_PIG	P01284 sus scrofa
6	135	95.1	72	VIP_RABIT	P32649 coryctolagus
7	135	95.1	118	Q5TCY7_HUMAN	Q5TCY7 homo sapien
8	135	95.1	145	Q7M2Y9_MACFA	Q7M2Y9 macaca fasc
9	135	95.1	153	Q7TSR4_9MURI	Q7TSR4 arvicanthis
10	135	95.1	169	Q5TCY8_HUMAN	Q5TCY8 homo sapien
11	135	95.1	170	VIP_BOVIN	P81401 bos taurus
12	135	95.1	170	VIP_HUMAN	P01282 homo sapien
13	135	95.1	170	VIP_MOUSE	P32648 mus musculus
14	135	95.1	170	VIP_RAT	P01283 rattus norv
15	135	95.1	170	Q5TCY9_HUMAN	Q5TCY9 homo sapien
16	135	95.1	171	Q9D2Z7_MOUSE	Q9D2Z7 mus musculus
17	122	85.9	72	VIP_CANFO	P04566 cavia porce
18	120	84.5	28	VIP_ALUMI	P48142 alligator m
19	120	84.5	28	VIP_RANRI	P81016 rana ridibu
20	120	84.5	70	Q4TZX3_ANAPL	Q4TZX3 anas platyr
21	120	84.5	86	Q4TZY9_9AVES	Q4TZY9 anser anser
22	120	84.5	200	VIP_CHICK	P48143 gallus gall
23	120	84.5	200	VIP_MELGA	P45644 meleagris g
24	120	84.5	202	Q7ZTG8_XENLA	Q7ZTG8 xenopus lae
25	119	83.8	28	VIP_SCYCA	P03685 scylliorhnu
26	119	83.8	28	Q9PRI9_AMICA	Q9PRI9 amia calva
27	119	83.8	147	Q4SQN2_TETNG	Q4SQN2 tetraodon n
28	115	81.0	28	Q9PRN8_CARAU	Q9PRN8 carassius a
29	112	78.9	28	VIP_DIDMA	P35089 didelphis m
30	109	76.8	25	VIP_GADMO	P09684 gadus morhu
31	102	71.8	38	Q75W85_MISAN	Q75W85 misgurnus a

32 99 69.7 172 2 Q9DE29_BRARE Q9DE29 brachydanio
33 99 69.7 199 2 Q5XJ29_BRARE Q5XJ29 brachydanio
34 98 69.0 38 2 Q75W94_HALRO Q75W94 halocynthia
35 98 69.0 38 2 Q8IU36_PERAM Q8IU36 periplaneta
36 98 69.0 38 2 Q8IU37_SEPLE Q8IU37 sepioteuthi
37 98 69.0 38 2 Q8IU38_HYDMA Q8IU38 hydra magni
38 98 69.0 38 2 Q8IU39_DUGJA Q8IU39 dugesia jap
39 98 69.0 38 2 Q75W87_ONCMY Q75W87 oncorhynchu
40 98 69.0 38 2 Q75W90_9TELE Q75W90 sardinops m
41 98 69.0 38 2 Q75W92_9PERC Q75W92 stephanolep
42 98 69.0 38 2 Q8AYP4_ACISC Q8AYP4 acipenser s
43 98 69.0 38 2 Q8AYP5_TRAJP Q8AYP5 trachurus j
44 98 69.0 62 2 Q53B12_9PRIM Q53B12 gorilla gor
45 98 69.0 62 2 Q53B13_FONPY Q53B13 pongo pygma

ALIGNMENTS

RESULT 1

VIP_CANFA

ID VIP_CANFA STANDARD; PRT; 28 AA.

AC P63289; P04565;

DT 13-AUG-1987 (Rel. 05, Created)

DT 13-AUG-1987 (Rel. 05, Last sequence update)

DT 13-SEP-2005 (Rel. 48, Last annotation update)

DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal

DE polypeptide).

GN Name=VIP;

OS Canis familiaris (Dog).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;

OC Canis.

OX NCBI_TaxID=9615;

RN [1]

RP PROTEIN SEQUENCE.

RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;

RA Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;

RT "Purification and amino acid sequences of dog, goat and guinea pig

RT VIPs";

RL Peptides 7 Suppl. 1:17-20(1986).

CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,

CC stimulates myocardial contractility, increases glycogenolysis and

CC relaxes the smooth muscle of trachea, stomach and gall bladder.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- SIMILARITY: Belongs to the glucagon family.

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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -

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CC use as long as its content is in no way modified and this statement is not

CC removed.

CC -----

CC PIR; A60304; A60304.

CC HSSP; P18509; 1GBA.

CC Ensembl; ENSCAFG0000000538; Canis familiaris.

CC InterPro; IPR000532; Glucagon.

CC Pfam; PF00123; Hormone 2; 1.

CC PRINTS; PR00275; GLUCAGON.

CC SMART; SM00070; GLUCA; 1.

CC PROSITE; PS00260; GLUCAGON; 1.

CC Amidation; Direct protein sequencing; Glucagon family; Hormone.

FW MOD RES 28 28 Asparagine amide.

SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF63F CRC64;

Query Match 95.1%; Score 135; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 7.3e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

1 HSDAVFTNRYTLRKQMAVKYLSILN 28

Db 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

```

RESULT 2
VIP_CAPHI
ID VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63290; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Names:VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OC NCBI_TaxID=9925;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3749846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -1- FUNCTION: VIP causes vasodilatation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC -----
CC HSPG; P18509; 1G6A.
DR InterPro: IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313P573PF6F3F CRC64;

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNTYRLRKQMAVKYKLSILN 28
| | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTNTYRLRKQMAVKYKLSILN 28

RESULT 3
VIP_MACMU
ID VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DT 13-SEP-2005 (Rel. 48, Created)
DT 13-SEP-2005 (Rel. 48, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
GN Name:VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheciidae; Cercopithecinae; Macaca.
OC NCBI_TaxID=9544;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RA Yu J.-H., Xin Y., Eng J., Yalow R.S.;

```

RL Regul. Pept. 38:145-154 (1992).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SURCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC removed.
CC -----
DR PIR; B60072; VRSH.
DR HSHP; P18509; IGEA.
DR InterPro: IPR00532; Glucagon.
DR Pfam; PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 95.1%; Score 135; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.3e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTNRYTLRKQMAVKYLSILN 28

RESULT 5
ID_VIP_PIG STANDARD; PRT; 72 AA.
AC P01284; QTRNO;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP PROTEIN SEQUENCE OF 1-27.
RA MEDLINE=82082498; PubMed=6947244;
RX Tatamoto K.; Mutt V.;
RT "Isolation and characterization of the intestinal peptide porcine PHI
RT (PHI-27), a new member of the glucagon-secretin family.";
RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607 (1981).
RN [2]
RP PROTEIN SEQUENCE OF 1-24.
RC TISSUE=Duodenum;
RX MEDLINE=93038640; PubMed=1329741;
RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
RT "Organ distribution and characterization of porcine peptides (VIP,
RT CGRP and PHI) that increase cAMP in rat platelets";
RL Biochem. Biophys. Res. Commun. 187:1587-1593 (1992).
RN [3]
RP PROTEIN SEQUENCE OF 28-58.
RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
RA Gavellin G., Andersson M., Dimalline R., Jorvall H., Mutt V.;
RT "Isolation and characterization of a variant form of vasoactive
RT intestinal polypeptide";
RL Peptides 9:469-474 (1988).
RN [4]
RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V.; Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The
RT amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589 (1974).
RN [5]
RP SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RL J. Am. Chem. Soc. 96:4973-4978 (1974).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC removed.
CC -----
DR PIR; A01549; VRFG.
DR HSHP; P18509; IGEA.
DR InterPro: IPR00532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 72 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON TER 1 1
FT NON TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 95.1%; Score 135; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKYLSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 45 HSDAVFTDNYTLRLKQMAVKYLSILN 72

RESULT 6
ID_VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscall L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

```
"Amino acid sequence of VIP, PHI and secretin from the rabbit small
intestine.";
RL Peptides 11:123-128(1990).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC HSSP; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD_RES 27 27 Isoleucine amide.
FT MOD_RES 72 72 Asparagine amide.
FT MOD_RES 1 1
FT NON_TER 72 72
FT SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C1CA3A CRC64;
SQ
Query Match 95.1%; Score 135; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 45 HSDAVFTDNYTRLRKQMAVKKYLNSILN 72

RESULT 7
Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.
ID Q5TCY7
AC Q5TCY7
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide (Fragment).
GN Name=VIP; ORFNames=RP4-546K19.1-003;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OC NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133566; CA121766.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1
FT SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;
SQ
Query Match 95.1%; Score 135; DB 2; Length 118;
Best Local Similarity 96.4%; Pred. No. 3.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 1; Gaps 0;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 74 HSDAVFTDNYTRLRKQMAVKKYLNSILN 101

RESULT 8
Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
ID Q7M2Y9
AC Q7M2Y9
DT 01-MAR-2004 (TrEMBLrel. 26, Created)
DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Vasoactive intestinal peptide precursor (Fragment).
OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini;
OC Cercopitheidae; Cercopithecinae; Macaca.
OC NCBI_TaxID=9541;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
RA Benson D.L.; Isackson P.J.; Jones E.G.;
RT "In situ hybridization reveals VIP precursor mRNA-containing neurons
in monkey and rat neocortex.";
RL Brain Res. Mol. Brain Res. 9:169-174(1991).
DR PIR; A60038; A60038.
DR HSSP; P18509; IGEA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON_TER 1
FT NON_TER 145
FT SEQUENCE 145 AA; 16324 MW; IABE5D98D853FESC CRC64;
SQ
Query Match 95.1%; Score 135; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 4.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTRNYTRLRKQMAVKKYLNSILN 28
Db 100 HSDAVFTDNYTRLRKQMAVKKYLNSILN 127

RESULT 9
Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
ID Q7TSR4
AC Q7TSR4
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Vasoactive intestinal polypeptide (Fragment).
OS Arvicanthus ansorgei.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Arvicanthis.
OC NCBI_TaxID=204747;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pavet P.;
RA Masson-Pevet M.;
RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY225375; AAP15167.1; -; mRNA.
DR HSSP; P18509; IGEA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
FT NON_TER 1
FT SEQUENCE 153 AA; 16324 MW; IABE5D98D853FESC CRC64;
SQ
Query Match 95.1%; Score 135; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 4.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

  Query Match      95.1%; Score 135; DB 2; Length 153;
  Best Local Similarity 96.4%; Pred. No. 4.4e-12;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTLRKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8_HUMAN
ID Q5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

  Query Match      95.1%; Score 135; DB 2; Length 169;
  Best Local Similarity 96.4%; Pred. No. 4.9e-12;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTLRKQMAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide
DE histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP)
DE (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA MEDLINE=2209342; PubMed=12097482;
RX Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27
RT synergistically regulates vasoactive intestinal polypeptide gene
RT transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duodenum;

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RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from
RT bovine upper intestine. Relationships to other peptides of the
RT glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal
RT peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
RN
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC
CC -!- FUNCTION: PHI also causes vasodilation.
CC
CC -!- SUBCELLULAR LOCATION: Secreted.
CC
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
CC with the human precursor sequence.
CC
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
CC -----
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; AF503910; AM28152.1; -; mRNA.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25
FT PROPEP 26 79
FT PEPTIDE 81 107 Intestinal peptide PHI-27.
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT group).
SQ SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

  Query Match      95.1%; Score 135; DB 1; Length 170;
  Best Local Similarity 96.4%; Pred. No. 5e-12;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
  ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHV-42;
DE Intestinal peptide PHM-27 (Peptide histidine methioninamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

```


OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=5571696;
RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RL 27-like peptide, PHN-27.";
RL Nature 304:547-549(1983).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2939091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaiharu N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RL peptide/PHN-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
RN [3]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004065; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
RN [4]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RL intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
RN [5]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamater J.F., Buell G.N., Kawahima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RL bacterial cells.";
RL Peptides 6:95-102(1985).
RN [6]
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.D., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.P., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Frange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Hellon E., Kettner M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalius D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RL and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [7]
RP NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RL gene in a human tumor.";
RL Peptides 7:1-6(1986).
RN [8]
RP NUCLEOTIDE SEQUENCE OF 50-170.
RX TISSUE=PANCREATIC carcinoma;
RN [9]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RL storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
RN [10]
RP PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yiangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RL histidine valine 42, a novel prepro-vasoactive intestinal peptide-
derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
RN [11]
RP PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Pheochromocytoma;
RA MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamata M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RL platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
RN [12]
RP STRUCTURE BY NMR OF VIP.
RX MEDLINE=91323243; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RL dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC [1]
CC FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC [2]
CC FUNCTION: PHM and PHV also cause vasodilation.
CC [3]
CC SUBCELLULAR LOCATION: Secreted.
CC [4]
CC SIMILARITY: Belongs to the glucagon family.
CC [5]
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC [6]
CC EMBL; L00157; AAA61289.1; -; Genomic_DNA.
CC EMBL; L00154; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL; L00155; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL; L00156; AAA61289.1; JOINED; Genomic_DNA.
CC EMBL; M33027; AAA69515.1; -; Genomic_DNA.
CC EMBL; M1553; AAA61284.1; -; Genomic_DNA.
CC EMBL; M1549; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M1550; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M1551; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M1552; AAA61284.1; JOINED; Genomic_DNA.
CC EMBL; M14623; AAA61288.1; -; Genomic_DNA.
CC EMBL; M14619; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M14620; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M14621; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M14622; AAA61288.1; JOINED; Genomic_DNA.
CC EMBL; M36606; AAA61286.1; -; Genomic_DNA.
CC EMBL; M36607; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL; M36608; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL; M36609; AAA61286.1; JOINED; Genomic_DNA.
CC EMBL; BC009794; AAH09794.1; -; mRNA.
CC EMBL; M36634; AAA61287.1; -; mRNA.


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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InVDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signaling. .; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20
FT PROPEP 21 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT CONFLICT 96 97
FT CONFLICT 113 113
FT CONFLICT 116 116
FT CONFLICT 136 136
SQ SEQUENCE 170 AA; 19169 MW; 935C0177F89508FD CRC64;

Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNTYRLRKQMAVKYLSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKYLSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=185154; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse."
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

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RT "High conservation of upstream regulatory sequences on the human and
RT mouse vasoactive intestinal peptide (VIP) genes.";
RL DNA Seq. 5:25-29(1994).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC
CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
DR PIR; A60037; A60037.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSMUSG00000019772; Mus musculus.
DR MGI; MGI:98933; Vip.
DR GO; GO:0005615; C:extracellular space; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 133 133
FT CARBOHYD N-linked (GLCNAC. .) (Potential).
FT SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNTYRLRKQMAVKYLSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKYLSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

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RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RA Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRET.
DR HSP; P18509; IGEA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT PEPTIDE 81 107 Intestinal peptide PHV-42 (By
FT PEPTIDE 125 152 similarity).
FT PROPEP 156 170 Intestinal peptide PHR-27.
FT MOD_RES 107 107 Vasoactive intestinal peptide.
FT -----
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide
FT MOD_RES 152 152 group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT CARBOHYD 68 68 group).
FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
FT SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;
SQ
Query Match 95.1%; Score 135; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. NO. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

```

```

RESULT 15
QSTCY9 HUMAN
ID QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 95.1%; Score 135; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. NO. 5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

Search completed: January 25, 2006, 15:18:39
Job time : 76 secs

```

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148
Sequence: 1 HSDAVFTWYTRLRKQMAVKYKLYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21.*

- 1: Geneseqp1980s.*
- 2: Geneseqp1990s.*
- 3: Geneseqp2000s.*
- 4: Geneseqp2001s.*
- 5: Geneseqp2002s.*
- 6: Geneseqp2003as.*
- 7: Geneseqp2003bs.*
- 8: Geneseqp2004s.*
- 9: Geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	135	91.2	28	5	ABG94138 Human vas
2	135	91.2	28	5	ABG94141 Human vas
3	134	90.5	28	5	ABG94139 Human vas
4	133	89.9	28	1	AAp10172 VIP. 3/20
5	133	89.9	28	1	AAp71039 Sequence
6	133	89.9	28	2	AAr34943 Porcine V
7	133	89.9	28	2	AAr40272 Native VI
8	133	89.9	28	2	AAr53111 Bronchodi
9	133	89.9	28	2	AAr53109 Bronchodi
10	133	89.9	28	2	AAr53110 Bronchodi
11	133	89.9	28	2	AAr87092 Vasoactiv
12	133	89.9	28	2	AAr83785 VIP. 2/19
13	133	89.9	28	2	AAr97810 Vasoactiv
14	133	89.9	28	2	AAr93023 Human glu
15	133	89.9	28	2	AAw65188 Vasoactiv
16	133	89.9	28	2	AAw06120 Human VIP
17	133	89.9	28	2	AAw06119 Mouse VIP
18	133	89.9	28	2	AAw06114 Rabbit VI
19	133	89.9	28	2	AAw06113 Macaque V
20	133	89.9	28	2	AAw06121 Pig VIP p
21	133	89.9	28	2	AAw06122 Goat VIP p
22	133	89.9	28	2	AAw06115 Dog VIP p
23	133	89.9	28	2	AAw06112 Sheep VIP
24	133	89.9	28	2	AAw37791 Vasoactiv

25	133	89.9	28	2	AAW71677	Aaw71677 Vasoactiv
26	133	89.9	28	2	AAy30769	Aay30769 Vasoactiv
27	133	89.9	28	2	AAy44196	Aay44196 Human vas
28	133	89.9	28	3	AAy94560	Aay94560 Vasoactiv
29	133	89.9	28	4	AAB85707	Aab85707 Peptide h
30	133	89.9	28	4	AAB85710	Aab85710 Peptide h
31	133	89.9	28	4	AAB91279	Aab91279 Vasoactiv
32	133	89.9	28	4	AAB91278	Aab91278 Vasoactiv
33	133	89.9	28	4	AAE12028	AAe12028 Porcine v
34	133	89.9	28	4	AAE37111	AAe37111 Human vas
35	133	89.9	28	4	AAg70459	AAg70459 Vasoactiv
36	133	89.9	28	4	AAB50845	Aab50845 Human pro
37	133	89.9	28	4	AAU09653	Aau09653 Porcine i
38	133	89.9	28	4	AAB45614	Aab45614 Native va
39	133	89.9	28	5	AAE19604	AAe19604 Human ste
40	133	89.9	28	5	AAE19627	AAe19627 Human vas
41	133	89.9	28	5	AAE19603	AAe19603 Human vas
42	133	89.9	28	5	ABB06677	Abb06677 Mammalian
43	133	89.9	28	5	AAU85989	Aau85989 Modified
44	133	89.9	28	5	AAU97783	Aau97783 Tumour sp
45	133	89.9	28	5	ABG94140	Abg94140 Human vas

ALIGNMENTS

RESULT 1
ABG94138
ID ABG94138 standard; peptide; 28 AA.
XX
AC ABG94138;
XX
DT 27-NOV-2002 (first entry)
XX
DE Human vasoactive intestinal polypeptide (VIP) analogue #186.
XX
KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
XX
OS Unidentified.
XX
PN US2002099003-A1.
XX
PD 25-JUL-2002.
XX
PF 13-AUG-2001; 2001US-00929818.
XX
PR 28-OCT-1997; 97US-00959057.
PR 28-OCT-1997; 97US-00959064.
PR 27-OCT-1998; 98US-00181316.
PR 04-FEB-2000; 2000US-00498522.
XX
PA (WILSON) WILSON L F.
PA (PLAC) PLACE V A.
XX
PI Wilson LF, Place VA;
XX
DR WPI; 2002-697729/75.
XX
PT Treating sexual dysfunction in females comprises administering vasoactive
PT intestinal polypeptide or against to vagina and/or vulvar region.
XX
PS Claim 19; Page; 19pp; English.
XX
CC The invention relates to a method for treating sexual dysfunction in
CC females comprising administering a formulation comprising a vasoactive
CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
CC the vagina and/or vulvar region. The method is used for preventing

vaginal atrophy and pain during intercourse, for treating vaginal itching and dryness, for enhancing sexual desire and responsiveness in females and for maintaining improvement of the tissue health of the female genitalia. The method is also used for treating persistent or recurrent deficiency or absence of sexual fantasies and desire for sexual activity, frigidity, sexual aversion, menopausal or post-menopausal state, multiple sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy, diabetes mellitus, substance-induced decreases in sexual desire and responsiveness and primary and secondary anorgasmia. The formulation improves vaginal muscle tone and tissue health, increases vaginal lubrication and minimizes collagen misdeposition resulting from hypoxia. This sequence represents a human vasoactive intestinal polypeptide (VIP) analogue with agonist and/or antagonist activity. Note: The present sequence is not featured in the printed specification but was derived from the wild-type peptide shown in AUC93952

XX
SO Sequence 28 AA;

Query Match	91.2%;	Score 135;	DB 5;	Length 28;
Best Local Similarity	96.4%;	Pred. No. 4.4e-10;		
Matches	27;	Conservative	0;	Mismatches 1;
				Indels 0;
				Gaps 0;

1 HSDAVFTWNTYTRLRKQMAVKKYLNSILN 28
1 HSDAVFTWNTYTRLRKQMAVKKYLNSILN 28
1 HSDAVFTWNTYTRLRKQMAVKKYLNSILN 28
1 HSDAVFTWNTYTRLRKQMAVKKYLNSILN 28

RESULT 2
ABG94141
ID ABG94141 standard: peptide; 28 AA.

AC	ABG941141;	
XX		
DT	27-NOV-2002	(first entry)

Human vasoactive intestinal polypeptide (VIP) analogue #189.

Vasoactive intestinal polypeptide; VIP, female sexual dysfunction; vulva; vagina; vaginal atrophy; pain; intercourse; vaginal itching; vaginal dryness; sexual desire enhancement; female genitalia; frigidity; sexual aversion; menopausal state; post-menopausal state; sexual desire; sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus; peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia; vaginal muscle tone; vaginal lubrication; collagen misdeposition.

OS Unidentified.

PN US2002099003-A1.

25-JUL.-2002.

13-AUG-2001: 2001US-00929818.

28-OCT-1997: 97US-00959057.

PR 28-OCT-1997; 97US-00335064.
 22 OCT 1998 00191316

PR 04-FEB-2000; 2000US-00498522.

PA (WILS/) WILSON L F.

XX 9

XX

XXXXXX

PT intestinal polypeptide or against to vagina and/or vulvar region.

XX
pg 10. Date: 1999. English.

XX
cc
The findings related to a method for treating sexual dysfunction in

CC females comprising a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 XX Sequence 28 AA;

Query Match 90.5%; Score 134; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 5.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28

RESULT 4

AAP10172
 ID AAP10172 standard; peptide; 28 AA.

AC AAP10172;

DT 25-MAR-2003 (revised)
 DT 21-DEC-1992 (first entry)

XX
 XX VIP.

XX Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.

XX Homo sapiens.

XX JP56128721-A.

XX 08-OCT-1981.

XX 12-MAR-1980; 80JP-00030308.

XX 12-MAR-1980; 80JP-00030308.

XX (EISA) EISAI CO LTD.

XX WPI; 1981-86052D/47.

XX Antiallergic agent comprises peptide - contg. 28 amino acid units, is
 PT active against e.g. bronchial asthma and hay fever.

XX Claim 1; Page 1; 3pp; Japanese.

XX The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)

XX Sequence 28 AA;

Query Match 89.9%; Score 133; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 5

AAP71039
 ID AAP71039 standard; peptide; 28 AA.

XX AAP71039;

DT 03-OCT-2002 (revised)
 DT 05-APR-1991 (first entry)

XX Sequence of active ingredient in hair growth promoting compsn.

DE Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 XX hair growth promoter.

XX Synthetic.

XX EP225639-A.

XX 16-JUN-1987.

XX 10-DEC-1986; 86EP-00117190.

XX 10-DEC-1985; 85JP-00276099.

XX (MEIJ) MEIJI SEIKA KAISHA.

XX Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkoji T;

XX WPI; 1987-164873/24.

XX Hair growth promoting compsn. - contg. vasoactive intestinal polypeptide
 PT and carrier.

XX Claim 1; Page 8; 10pp; English.

XX When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

XX Sequence 28 AA;

Query Match 89.9%; Score 133; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 6

AAR34943
 ID AAR34943 standard; peptide; 28 AA.

XX AAR34943;

DT 25-MAR-2003 (revised)
 DT 28-JUL-1993 (first entry)

XX Porcine VIP.

XX Vasoactive intestinal peptide; asthma; bronchodilation activity;

KW bronchiotracheal constrictive disorders.
 XX
 OS Sus scrofa.
 XX
 PN EP536741-A2.
 XX
 XX 14-APR-1993.
 PD
 XX 08-OCT-1992; 92EP-00117185.
 PF
 XX 11-OCT-1991; 91US-00773747.
 XX
 XX (HOFF) HOFFMANN LA ROCHE & CO AG F.
 PA
 XX Bolin DR, Odonnell M;
 FI
 XX WPI; 1993-118996/15.
 DR
 XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
 XX the treatment of bronchotracheal constrictive disorders e.g. asthma.
 PT
 XX
 XX Disclosure; Page 65; 141pp; English.
 PS
 XX The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)
 XX
 XX Sequence 28 AA;
 SQ
 Query Match 89.9%; Score 133; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 7
 AAR40272
 ID AAR40272 standard; protein; 28 AA.
 AC AAR40272;
 XX 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 XX
 XX Native VIP.
 DE
 XX Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 KW side effect; bronchoconstrictive disorder; asthma.
 KW
 XX Sus scrofa.
 OS
 XX Key Location/Qualifiers
 FH Modified-site 28 /note= "C-terminal is amidated"
 FT
 XX US5234907-A.
 PN
 XX 10-AUG-1993.
 PD
 XX 24-APR-1991; 91US-00690300.
 XX
 XX 30-JUN-1989; 89US-00374503.
 XX
 XX (HOFF) HOFFMANN LA ROCHE INC.
 PA
 XX

PI Bolin DR;
 XX WPI; 1993-264645/33.
 DR
 XX New vasoactive intestinal peptide analogues - are potent bronchodilators
 XX without cardiovascular side effects, used for treating, e.g. asthma.
 PT
 XX Disclosure; Page 25-26; 66pp; English.
 PS
 XX VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
 CC formulae; AAR40279-364: examples). The VIP analogues are potent
 CC bronchodilators and have no cardiovascular side effects. They are used
 CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
 CC on 25-MAR-2003 to correct PF field.)
 XX
 XX Sequence 28 AA;
 SQ
 Query Match 89.9%; Score 133; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 7.8e-10;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 8
 AAR53111
 ID AAR53111 standard; peptide; 28 AA.
 AC AAR53111;
 XX 20-DEC-1994 (first entry)
 DT
 XX Bronchodilator peptide #21.
 DE
 XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
 KW selectively; toxicity; mammal; bronchodilator.
 KW
 XX Synthetic.
 OS
 XX Key Location/Qualifiers
 FH Misc-difference 10 /note= "D-form residue"
 FT Misc-difference 22 /note= "D-form residue"
 FT Modified-site 28 /note= "Amidated C-terminal"
 FT
 XX JP06092991-A.
 PN
 XX 05-APR-1994.
 PD
 XX 28-FEB-1991; 91JP-00034335.
 XX
 XX 28-FEB-1991; 91JP-00034335.
 PR
 XX (DAIL) DAICEL CHEM IND LTD.
 PA (MEIJ) MEIJI SEIKA KAISHA.
 XX
 XX WPI; 1994-147946/18.
 DR
 XX Active peptide(s), having smooth muscle relaxing activity - useful as
 PT bronchodilators.
 PT
 XX Disclosure; Page 5; 29pp; Japanese.
 PS
 XX The sequences given in AAR53091-111 are synthetic peptides based on
 CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
 CC the smooth muscle selectively and are only low toxic-non- toxic to
 CC mammals. These peptides may be used as bronchodilators. They are prepared
 CC by solid phase synthesis using a resin having an amino functional group
 CC capable of bonding to the amino acid at the carboxy terminal through a

RESULT 10
AAR53110

```

FT XX /note= "amidated"
XX FR2719316-A1.
XX PN
XX PD 03-NOV-1995.
XX PF 28-APR-1994; 94FR-00005174.
XX PI 28-APR-1994; 94FR-00005174.
XX PR (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX PA Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX PI WPI; 1995-375617/49.
XX DR
XX XX
XX XX New nucleic acid complexes with cationic polymers - useful for genetic
XX PT transformation of cells.
XX FT
XX PS Claim 11; Page 43; 59pp; French.
XX CC In novel complexes of negatively-charged nucleic acids and positively-
XX CC charged polymers, the polymers comprise monomer subunits bearing NH3+
XX CC groups, at least 10% of which are replaced by uncharged amino groups
XX CC bearing a substit. that has at least one -OH group and is not recognised
XX CC by cell membrane receptors; the side-chain groups of the polymer (i.e.
XX CC the NH3+ and/or OH groups) may be substd. by a group that is recognised
XX CC by a cell membrane receptor, provided that at least 30% of the NH3+
XX CC groups remain free. The complexes are useful for transfecting particular
XX CC nucleic acid sequences into particular cell types, depending on the
XX CC identity of the cell membrane receptor ligands involved, e.g. for gene
XX CC therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
XX CC antigens recognised by lectins, natural metabolites (such as biotin,
XX CC tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
XX CC intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
XX CC peptide hormones such as alpha-MSH, chemotactic factors and integrin
XX CC ligands)
XX SQ Sequence 28 AA;
XX Query Match 89.9%; Score 133; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 7.8e-10;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 12
AAR83785
ID AAR83785 standard; peptide; 28 AA.
XX AAR83785;
XX 27-FEB-1996 (first entry)
XX DE VIP.
XX KW VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
XX KW secretin; nervous system; digestive system; smooth muscle; relaxant;
XX KW bronchial asthma; impotence; therapy.
XX OS
XX Sus scrofa.
XX PH Key Location/Qualifiers
XX FT Misc-difference 29 /note= "amidated"
XX XX
XX PN EP63406-A1.
XX PD 19-JUL-1995.
XX FT

```

```

PF 19-DEC-1994; 94EP-00120126.
XX XX
XX PR 20-DEC-1993; 93JP-00319815.
XX XX
XX PA (SANW ) SANWA KAGAKU KENKYUSHO CO.
XX XX
XX PI Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX XX
XX DR WPI; 1995-247502/33.
XX XX
XX PT New modified form of vasoactive intestinal polypeptide - with C-terminal
XX PT substd. amide residue, has greater in vivo stability and persistence,
XX PT useful for treating asthma and impotence.
XX XX
XX PS Disclosure; Page 3; 16pp; English.
XX XX
XX CC This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX CC a peptide hormone that shows smooth muscle relaxant activity. The
XX CC structure of VIP is similar to that of the other peptides in the glucagon
XX CC -secretin family, to which it belongs. VIP is present in the nervous
XX CC system and the digestive system tracts. It is also found in the lungs of
XX CC normal patients (however, it is not found in the lungs of people
XX CC suffering from bronchial asthma). The sequences shown in AAR83784 and
XX CC AAR83786 are analogues of this sequence. These analogues are found to be
XX CC resistant to protease digestion. The analogues can be used to treat
XX CC asthma (by inhalation) and impotence (percutaneously). Compared to
XX CC natural VIP, the analogue sequences have better in vivo stability. The
XX CC analogue sequences are also more persistent than natural VIP and have
XX CC excellent affinity for biological membranes
XX SQ Sequence 28 AA;
XX Query Match 89.9%; Score 133; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 7.8e-10;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 13
AAR97810
ID AAR97810 standard; peptide; 28 AA.
XX AAR97810;
XX 22-AUG-1996 (first entry)
XX DE Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX KW Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX KW burn; decubitis; diabetes; ulcer; bedsores; pressure sore.
XX OS Synthetic.
XX PH Key Location/Qualifiers
XX FT Modified-site 28 /note= "amidated"
XX XX
XX PN JP08040926-A.
XX PD 13-FEB-1996.
XX XX
XX PF 03-AUG-1994; 94JP-00182457.
XX PR 03-AUG-1994; 94JP-00182457.
XX PA (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX XX
XX DR WPI; 1996-157021/16.
XX FT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as

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PT active component.
PS Claim 1; Page 2; 4pp; Japanese.
XX
XX Vasoactive intestinal peptide and related compounds are known to have
CC strong vasodilatory activity. They have now been found to be effective in
CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
CC novel skin ulcer remedy
XX
XX Sequence 28 AA;
SQ

Query Match      89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.8e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
AAR93023
ID AAR93023 standard; protein; 28 AA.
XX
XX AAR93023;
AC
XX
XX 09-AUG-1996 (first entry)
DT
XX
XX Human glucagon degrading enzyme - VIP substrate.
DE
XX
XX Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
KW amplification; polymerase chain reaction; probe; expression vector;
KW eukaryote; SV40 promoter; COS-7.
XX
XX Synthetic.
OS
XX
XX Key Location/Qualifiers
FH Cleavage-site 17..18
FT Modified-site 28
FT Modified-site 28 /note= "contains C-terminal amide group"
FT
XX
XX JP08023972-A.
PN
XX
XX 30-JAN-1996.
PD
XX
XX 19-JUL-1994; 94JP-00187936.
PF
XX
XX 19-JUL-1994; 94JP-00187936.
PR
XX
XX (SUNR ) SUNTORY LTD.
PA
XX
XX WPI; 1996-133414/14.
DR
XX
XX New glucagon decomposing enzyme, and DNA encoding it - for specifically
PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT and treatment of diseases caused by excess glucagon and VIP.
XX
XX Claim 1; Page 2; 18pp; Japanese.
PS
XX

A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
CC cleavage of glucagon, vasoactive intestinal peptide and selectin
CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC library with an anti-GDE peptide antibody, amplifying the inserts with
CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC This screening resulted in the full length clone designated lambda GD84-
CC 2. The coding region of the clone was subsequently PCR amplified by the
CC primers AAT11576-7 and inserted into the eukaryotic expression vector
CC pKDCR under control of the SV40 promoter for production of the protein in
CC COS-7 cells. The protein is useful in preventing and treating diseases

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CC characterised by an excess of glucagon or vasoactive intestinal peptide
XX
XX SQ Sequence 28 AA;
SQ

Query Match      89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.8e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 15
AAW65188
ID AAW65188 standard; peptide; 28 AA.
XX
XX AAW65188;
AC
XX
XX 02-OCT-1998 (first entry)
DT
XX
XX Vasoactive intestinal peptide (VIP) analogue.
DE
XX
XX Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
KW vasopressin; vasoactive intestinal peptide; VIP.
XX
XX Synthetic.
OS
XX
XX Key Location/Qualifiers
FH Modified-site 28
FT Modified-site 28 /note= "C-terminal amide"
FT
XX
XX US5527882-A.
PN
XX
XX 18-JUN-1996.
PD
XX
XX 07-NOV-1994; 94US-00335202.
PF
XX
XX 07-JUL-1989; 89US-00376839.
PR
XX
XX 16-SEP-1992; 92US-00945664.
PR
XX
XX (REGC ) UNIV CALIFORNIA.
PA
XX
XX Young JD, Mitchell AR;
XX
XX WPI; 1996-299898/30.
DR
XX
XX New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
PT agonists or antagonists, useful e.g. as analgesics.
XX
XX Disclosure; Col 7-8; 15pp; English.
PS
XX
XX The invention relates to the obtaining of a potent agonist or antagonist
CC peptide by the replacement of selected amino acids with synthetic achiral
CC amino acids. The present sequence represents a vasoactive intestinal
CC peptide (VIP) analogue, where at least one of Phe6 and Met17 is intended
CC to be replaced by N-benzylglycine, N-cyclohexylmethylglycine or the ring
CC substituted derivatives thereof
XX
XX SQ Sequence 28 AA;
SQ

Query Match      89.9%; Score 133; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.8e-10;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
   ||||| ||||| ||||| ||||| |||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:08:20
Job time : 77.875 secs

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Result No.	Score	Query %		Length	DB	ID	Description
		Match					
1	148	100.0	28	2	US-09-528-200-6		Sequence 6, Appli
2	138	93.12	28	2	US-09-528-200-2		Sequence 2, Appli
3	135	91.2	28	2	US-09-528-200-4		Sequence 4, Appli
4	134	90.5	28	2	US-09-528-200-3		Sequence 3, Appli
5	134	90.5	28	2	US-09-528-200-5		Sequence 5, Appli
6	133	89.9	28	1	US-07-690-300B-1		Sequence 1, Appli
7	133	89.9	28	1	US-07-676-987A-1		Sequence 1, Appli
8	133	89.9	28	1	US-07-668-906-1		Sequence 1, Appli
9	133	89.9	28	1	US-08-201-092-1		Sequence 1, Appli
10	133	89.9	28	1	US-07-924-054-11		Sequence 11, Appl
11	133	89.9	28	1	US-08-243-082-1		Sequence 1, Appli
12	133	89.9	28	1	US-08-361-443-1		Sequence 1, Appli
13	133	89.9	28	1	US-08-288-681A-1		Sequence 1, Appli
14	133	89.9	28	1	US-07-776-272-26		Sequence 26, Appl
15	133	89.9	28	1	US-08-308-729-1		Sequence 1, Appli
16	133	89.9	28	1	US-08-062-472B-40		Sequence 40, Appl
17	133	89.9	28	1	US-08-171-701A-1		Sequence 1, Appli
18	133	89.9	28	1	US-08-741-678-1		Sequence 1, Appli
19	133	89.9	28	1	US-08-519-180-2		Sequence 2, Appli
20	133	89.9	28	1	US-08-414-424-1		Sequence 1, Appli
21	133	89.9	28	1	US-08-413-708B-1		Sequence 1, Appli
22	133	89.9	28	1	US-08-618-253-37		Sequence 37, Appl
23	133	89.9	28	1	US-08-897-624-1		Sequence 1, Appli
24	133	89.9	28	2	US-08-930-845-1		Sequence 1, Appli
25	133	89.9	28	2	US-08-952-568-3		Sequence 3, Appli
26	133	89.9	28	2	US-08-952-568-4		Sequence 4, Appli
27	133	89.9	28	2	US-08-952-568-5		Sequence 5, Appli

; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17 17 713.9
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-2

Query Match 93.2%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTFNYYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-528-200-4
; Sequence 4, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-4

Query Match 91.2%; Score 135; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.9e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-09-528-200-3
; Sequence 3, Application US/09528200

; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-3

Query Match 90.5%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTKNYTRLRKQMAVKKYLNSILN 28

RESULT 5
US-09-528-200-5
; Sequence 5, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGNER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-528-200-5

Query Match 90.5%; Score 134; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||

RESULT 6
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingeland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa

US-07-690-300B-1
Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||

RESULT 7
US-07-676-987A-1
; Sequence 1, Application US/07676987A
; Patent No. 5273963
; GENERAL INFORMATION:
; APPLICANT: TERRY W. MOODY
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
; CELL AND NONSMALL CELL LUNG CANCERS
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
; STREET: 555 THIRTEENTH ST. N.W.
; CITY: WASHINGTON

STATE: D. C.
COUNTRY: U.S.
ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07676,987A
; FILING DATE: 19910329
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: REPPER, GEORGE R.
; REGISTRATION NUMBER: 31,414
; REFERENCE/DOCKET NUMBER: 1783-101
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 783-6040
; TELEFAX: (202) 783-6031
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide

US-07-676-987A-1
Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTNRYTLRKQMAVKKYLNSILN 28
|||||

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||

RESULT 8
US-07-868-906-1
; Sequence 1, Application US/07868906
; Patent No. 5376637
; GENERAL INFORMATION:
; APPLICANT: Sawai, Kiichi
; APPLICANT: Kuroono, Masayasu
; APPLICANT: Mitani, Takahiko
; APPLICANT: Sato, Makoto
; APPLICANT: Takahashi, Haruo
; APPLICANT: Ohwaki, Hiroyuki
; TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
; VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/868,906
; FILING DATE: 19920416
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 3-90671
; FILING DATE: 22-APR-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: 920238N

TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 659-2930
TELEFAX: (202) 887-0357
TELEX: 440142
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-868-906-1

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 9
US-08-201-092-1
Sequence 1, Application US/08201092
Patent No. 5428015
GENERAL INFORMATION:
APPLICANT: KURONO, Masayasu
APPLICANT: MITANI, Takahiko
APPLICANT: TAKAHASHI, Haruo
APPLICANT: SAWAI, Kiichi
TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Armstrong, Nikaide, Marmelstein, Kubovcik, &
ADDRESSEE: Murray
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D. C.
COUNTRY: U. S. A.
ZIP: 20006
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/201,092
FILING DATE: 24-FEB-1994
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 2-165739
FILING DATE: 26-JUN-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 2-408425
FILING DATE: 27-DEC-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/704,143
FILING DATE: 22-MAY-1991
ATTORNEY/AGENT INFORMATION:
NAME: Oram Jr., George E.
REGISTRATION NUMBER: 27,931
REFERENCE/DOCKET NUMBER: N910809
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)-659-2930
TELEFAX: (202)-887-0357
TELEX: 440142
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide

FRAGMENT TYPE: C-terminal
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
TISSUE TYPE: Small intestine, proximal
US-08-201-092-1
Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 10
US-07-924-054-11
Sequence 11, Application US/07924054
Patent No. 5486472
GENERAL INFORMATION:
APPLICANT: SUZUKI, No. 5486472uhiro
APPLICANT: KITADA, Chieko
APPLICANT: TSUDA, Masao
TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS &
ADDRESSEE: CUSHMAN
STREET: 130 Water Street
CITY: Boston
STATE: Massachusetts
COUNTRY: US
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/924,054
FILING DATE: 19920903
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: RESNICK, David S.
REGISTRATION NUMBER: 34235
REFERENCE/DOCKET NUMBER: 40805
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 523-3400
TELEFAX: (617) 523-6440
TELEX: 200291 STRE UR
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-924-054-11

Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 11
US-08-243-082-1
Sequence 1, Application US/08243082
Patent No. 5506120
GENERAL INFORMATION:
APPLICANT: YAMAMOTO, Hiroaki

```

RESULT 12
US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoeshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiyo, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk

```

CORRESPONDENCE ADDRESS:
 ADDRESSEE: BIERMAN & MUSERLIAN
 STREET: 600 THIRD AVENUE
 CITY: NEW YORK
 STATE: NEW YORK
 COUNTRY: USA
 ZIP: 10016
 COMPUTER READABLE FORM:
 MEDIUM TYPE: FLOPPY DISK
 COMPUTER: IBM PC COMPATIBLE
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: ASCII
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/288,681A
 FILING DATE: 10-AUG-1994
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: FR/94/05174
 FILING DATE: 28-APR-1994
 ATTORNEY/AGENT INFORMATION:
 NAME: CHARLES A. MUSERLIAN
 REGISTRATION NUMBER: 19,683
 REFERENCE/DOCKET NUMBER: 410.005
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (212) 661-8000
 TELEFAX: (212) 661-8002
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 28
 TYPE: Amino Acid
 STRANDEDNESS: Unknown
 TOPOLOGY: Unknown

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; MOLECULE TYPE: PEPTIDE
US-08-288-681A-1
Query Match      89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 14
US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshi
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/776,272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E
; REGISTRATION NUMBER: 31,409
; REFERENCE/DOCKET NUMBER: P-450-23167
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-887-0400
; TELEFAX: 202-887-0605
; TELEX: 440706
; INFORMATION FOR SEQ ID NO: 26:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: YES
US-07-776-272-26
Query Match      89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 15
US-08-308-729-1
; Sequence 1, Application US/08308729
; Patent No. 5677419
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Cyclic Vasoactive Peptide
; ANALOGS:
; NUMBER OF SEQUENCES: 73
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; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingeland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/308,729
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/153,530
; FILING DATE:
; APPLICATION NUMBER: US 07/773,747
; FILING DATE: 11-OCT-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8322
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Sus scrofa
; PUBLICATION INFORMATION:
; DOCUMENT NUMBER: EP 325 044 A A
; FILING DATE: 22-DEC-1987
; PUBLICATION DATE: 26-JUL-1989
; RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
US-08-308-729-1
Query Match      89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:23:44
Job time : 21.875 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:48 ; Search time 53.625 Seconds
(without alignments)
218.167 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148

Sequence: 1 HSDAVFTWNTYRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

- Published Applications_AA_Main:
- 1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
 - 2: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
 - 3: /cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep.*
 - 4: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
 - 5: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
 - 6: /cgn2_6/ptodata/1/pubpaa/US11_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	135	91.2	28	3	US-09-929-818-187
2	135	91.2	28	3	US-09-929-818-190
3	134	90.5	28	3	US-09-929-818-188
4	133	89.9	28	3	US-09-929-818-1
5	133	89.9	28	3	US-09-929-818-189
6	133	89.9	28	3	US-09-929-818-189
7	133	89.9	28	3	US-09-929-818-189
8	133	89.9	28	3	US-09-929-818-189
9	133	89.9	28	3	US-09-929-818-189
10	133	89.9	28	3	US-09-929-818-189
11	133	89.9	28	3	US-09-929-818-189
12	133	89.9	28	3	US-09-929-818-189
13	133	89.9	28	3	US-09-929-818-189
14	133	89.9	28	3	US-09-929-818-189
15	133	89.9	28	3	US-09-929-818-189
16	133	89.9	28	3	US-09-929-818-189
17	133	89.9	28	3	US-09-929-818-189
18	133	89.9	28	3	US-09-929-818-189
19	133	89.9	28	3	US-09-929-818-189
20	133	89.9	28	3	US-09-929-818-189
21	133	89.9	28	3	US-09-929-818-189
22	133	89.9	28	3	US-09-929-818-189
23	133	89.9	28	3	US-09-929-818-189
24	133	89.9	28	3	US-09-929-818-189
25	133	89.9	28	3	US-09-929-818-189
26	133	89.9	28	3	US-09-929-818-189
27	133	89.9	28	3	US-09-929-818-189

28	133	89.9	28	5	US-10-930-548-3	Sequence 3, Appli
29	133	89.9	28	5	US-10-770-712-56	Sequence 56, Appl
30	133	89.9	28	5	US-10-799-897A-1	Sequence 1, Appli
31	133	89.9	28	6	US-11-066-697-454	Sequence 454, App
32	133	89.9	28	6	US-11-066-697-455	Sequence 455, App
33	133	89.9	29	4	US-10-131-543-11	Sequence 11, Appl
34	133	89.9	29	4	US-10-131-546-11	Sequence 11, Appl
35	133	89.9	29	4	US-10-131-546-11	Sequence 11, Appl
36	133	89.9	29	4	US-10-415-024-11	Sequence 11, Appl
37	133	89.9	29	6	US-11-088-596-11	Sequence 11, Appl
38	133	89.9	29	6	US-11-086-966-11	Sequence 11, Appl
39	133	89.9	30	3	US-09-929-818-203	Sequence 203, App
40	133	89.9	30	3	US-09-929-818-204	Sequence 204, App
41	133	89.9	30	3	US-09-929-818-205	Sequence 205, App
42	133	89.9	31	4	US-10-131-543-9	Sequence 9, Appli
43	133	89.9	31	4	US-10-131-543-10	Sequence 10, Appl
44	133	89.9	31	4	US-10-131-543-16	Sequence 16, Appl
45	133	89.9	31	4	US-10-131-546-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1
US-09-929-818-187
; Sequence 187, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 187
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-187

Query Match	91.2%	Score 135;	DB 3;	Length 28;
Beat Local Similarity	96.4%	Pred. No. 2.8e-12;		
Matches	27;	Conservative	0;	Mismatches 1;
		Indels	0;	Gaps 0;
Qy	1	HSDAVFTWNTYRLRKQMAVKYLSILN	28	
Db	1	HSDAVFTWNTYRLRKQMAVKYLSILN	28	

RESULT 2
US-09-929-818-190
; Sequence 190, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; APPLICANT: PLACE, VIRGIL A.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE

;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1998-10-27
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 190
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
;; OTHER INFORMATION: analog
US-09-929-818-190
Query Match 91.2%; Score 135; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTQNYTRLRKQMAVKKYLNSILN 28
RESULT 3
US-09-929-818-188
;; Sequence 188, Application US/09929818
;; Patent No. US20020099003A1
;; GENERAL INFORMATION:
;; APPLICANT: WILSON, LELAND F.
;; APPLICANT: PLACE, VIRGIL A.
;; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
;; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 188
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
;; OTHER INFORMATION: analog
US-09-929-818-188
Query Match 90.5%; Score 134; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.9e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTSNYTRLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-1
;; Sequence 1, Application US/09929818
;; Patent No. US20020099003A1
;; GENERAL INFORMATION:
;; APPLICANT: WILSON, LELAND F.
;; APPLICANT: PLACE, VIRGIL A.
;; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
;; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1998-10-27
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 1
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Homo sapiens
US-09-929-818-1
Query Match 89.9%; Score 133; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
RESULT 5
US-09-929-818-189
;; Sequence 189, Application US/09929818
;; Patent No. US20020099003A1
;; GENERAL INFORMATION:
;; APPLICANT: WILSON, LELAND F.
;; APPLICANT: PLACE, VIRGIL A.
;; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
;; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
;; TITLE OF INVENTION: AND AGONISTS THEREOF
;; FILE REFERENCE: 9050-0013.24
;; CURRENT APPLICATION NUMBER: US/09/929,818
;; CURRENT FILING DATE: 2001-08-13
;; PRIOR APPLICATION NUMBER: 09/498,522
;; PRIOR FILING DATE: 2000-02-04
;; PRIOR APPLICATION NUMBER: 09/181,316
;; PRIOR FILING DATE: 1998-10-27
;; PRIOR APPLICATION NUMBER: 08/959,064
;; PRIOR FILING DATE: 1997-10-28
;; PRIOR APPLICATION NUMBER: 08/959,057
;; PRIOR FILING DATE: 1997-10-28
;; NUMBER OF SEQ ID NOS: 207
;; SOFTWARE: PatentIn Ver. 2.1
;; SEQ ID NO 189
;; LENGTH: 28
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
;; OTHER INFORMATION: analog
US-09-929-818-189
Query Match 89.9%; Score 133; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy

1 HSDAFTNNTYTRLRKQMAYKKYLNSILN 28
||||| ||||| ||||| ||||| |||||

Dp

1 HSDAFTNNTYTRLRKQMAYKKYLNSILN 28

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RESULT 6
US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baizd, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-05-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

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RECORD 7
US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; TITLE OF INVENTION: DETECTION OF ANALYTES
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

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RESULT 8
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:

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; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; TITLE OF INVENTION: VPAC1R, VPAC2R, and PAC1R Agonists
; FILE REFERENCE: G80-016 CIP
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

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RESULT 9
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DiCICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate c
; TITLE OF INVENTION: mitogenic signal for
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: prt
; ORGANISM: Homo sapiens
US-10-044-722-8

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RESULT 10
US-10-004-530A-17
US-10-004-530A-17 Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10

; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11
US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; TITLE OF INVENTION: Analogs and Methods of Use Thereof
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1

; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 13
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K*ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 14
US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar

; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; CURRENT FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
||||| |||||||||
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 15
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 89.9%; Score 133; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 5.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
||||| |||||||||
Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148

Sequence: 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28

Scoring table: BLOSUM62

Gap 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA New:*

- 1: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep.*
- 2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 5: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	133	89.9	28	7	US-11-175-690-352
2	133	89.9	28	7	US-11-175-690-353
3	133	89.9	637	7	US-11-175-690-265
4	133	89.9	637	7	US-11-175-690-266
5	97	65.5	636	7	US-11-175-690-240
6	96	64.9	27	7	US-11-175-690-326
7	96	64.9	27	7	US-11-175-690-327
8	96	64.9	38	7	US-11-175-690-328
9	96	64.9	38	7	US-11-175-690-329
10	96	64.9	636	7	US-11-175-690-239
11	96	64.9	647	7	US-11-175-690-241
12	96	64.9	647	7	US-11-175-690-242
13	72	48.6	636	7	US-11-175-690-278
14	71	48.0	27	7	US-11-175-690-364
15	71	48.0	27	7	US-11-175-690-365
16	71	48.0	636	7	US-11-175-690-277
17	62	41.9	30	7	US-11-112-277-30
18	58	39.2	30	7	US-11-112-277-2
19	54	36.5	30	7	US-11-112-277-29
20	54	36.5	49	6	US-10-997-081A-26
21	54	36.5	49	6	US-10-997-081A-27
22	54	36.5	49	6	US-10-997-081A-28
23	54	36.5	49	6	US-10-997-081A-29
24	54	36.5	49	6	US-10-997-081A-30
25	54	36.5	49	6	US-10-997-081A-31

26 54 36.5 49 6 US-10-997-081A-32 Sequence 32, Appl
27 54 36.5 49 6 US-10-997-081A-35 Sequence 35, Appl
28 54 36.5 95 6 US-10-997-081A-25 Sequence 25, Appl
29 54 36.5 97 6 US-10-997-081A-11 Sequence 11, Appl
30 54 36.5 97 6 US-10-997-081A-18 Sequence 18, Appl
31 54 36.5 97 6 US-10-997-081A-19 Sequence 19, Appl
32 54 36.5 97 6 US-10-997-081A-20 Sequence 20, Appl
33 54 36.5 97 6 US-10-997-081A-21 Sequence 21, Appl
34 54 36.5 97 6 US-10-997-081A-22 Sequence 22, Appl
35 54 36.5 97 6 US-10-997-081A-23 Sequence 23, Appl
36 54 36.5 97 6 US-10-997-081A-40 Sequence 40, Appl
37 54 36.5 97 6 US-10-997-081A-41 Sequence 41, Appl
38 54 36.5 105 6 US-10-997-081A-10 Sequence 10, Appl
39 53 35.8 30 7 US-11-112-277-31 Sequence 31, Appl
40 48 32.4 567 7 US-11-120-422-7 Sequence 7, Appl
41 48 32.4 568 7 US-11-226-480-10 Sequence 10, Appl
42 48 32.4 636 7 US-11-175-690-268 Sequence 268, Appl
43 47 31.8 27 7 US-11-175-690-354 Sequence 354, Appl
44 47 31.8 27 7 US-11-175-690-355 Sequence 355, Appl
45 47 31.8 636 7 US-11-175-690-267 Sequence 267, Appl

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseitine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 89.9%; Score 133; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28

Db 1 HSDAVFTDNTYRLRKQMAVKYKLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06
PRIOR APPLICATION NUMBER: US 60/505,172
PRIOR FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: US 60/506,746
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patent In Ver. 2.0
SEQ ID NO 353
LENGTH: 28
TYPE: PRT
ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 89.9%; Score 133; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
Sequence 265, Application US/11175690
Publication No. US20060014254A1
GENERAL INFORMATION:
APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06
PRIOR APPLICATION NUMBER: US 60/505,172
PRIOR FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: US 60/506,746
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patent In Ver. 2.0
SEQ ID NO 265
LENGTH: 637
TYPE: PRT
ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 89.9%; Score 133; DB 7; Length 637;

Best Local Similarity 96.4%; Pred. No. 4.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
DB 610 HSDAVFTDNYTRLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
Sequence 266, Application US/11175690
Publication No. US20060014254A1
GENERAL INFORMATION:
APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06
PRIOR APPLICATION NUMBER: US 60/505,172
PRIOR FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: US 60/506,746
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patent In Ver. 2.0
SEQ ID NO 266
LENGTH: 637
TYPE: PRT
ORGANISM: Homo sapiens
US-11-175-690-266

Query Match 89.9%; Score 133; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 4.1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
DB 25 HSDAVFTDNYTRLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
Sequence 240, Application US/11175690
Publication No. US20060014254A1
GENERAL INFORMATION:
APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06


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; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 240
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match      65.5%; Score 97; DB 7; Length 636;
Best Local Similarity 64.3%; Pred. No. 1.5e-07;
Matches 18; Conservative 6; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSIL 28
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 52

RESULT 6
US-11-175-690-326
; Sequence 326, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 326
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-326

Query Match      64.9%; Score 96; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 6.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSIL 27
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 7
US-11-175-690-327
; Sequence 327, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
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; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match      64.9%; Score 96; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 6.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSIL 27
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 8
US-11-175-690-328
; Sequence 328, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match      64.9%; Score 96; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 9.8e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSIL 27
```

```

Db      1 HSDGIFTDSYRKRQMAVKKYLAAYL 27

RESULT 9
US-11-175-690-329
; Sequence 329, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 329
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-329

Query Match          64.9%; Score 96; DB 7; Length 38;
Best Local Similarity   66.7%; Pred. No; 9.8e-09;
Matches 18; Conservative    5; Mismatches 4; Indels 0; Gaps 0;

QY      1 HSDAVFTWNYTRLRKQMAVKKYLNSIL 27
       ||| :|| :|| :||||||| :||
Db      1 HSDGIFTDSYRKRQMAVKKYLAAYL 27

RESULT 10
US-11-175-690-239
; Sequence 239, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30

```



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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match      48.0%; Score 71; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 5e-05;
Matches 12; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

QY      1 HSDAVFTWNYTLRKQMAVKKYLNSIL 27
|:| | | | | | | | | | | | | | | |
Db      1 HADGVFTSDFSLLGLGQLSAKKYLESILM 27
```

Search completed: January 25, 2006, 15:31:43
Job time : 4.5 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148

Sequence: 1 HSDAVFTWNYTLRKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	133	89.9	28	B60071	vasoactive intesti
2	133	89.9	28	A60304	vasoactive intesti
3	133	89.9	55	VRBO	vasoactive intesti
4	133	89.9	55	VRBB	vasoactive intesti
5	133	89.9	55	VRSH	vasoactive intesti
6	133	89.9	58	VRPG	vasoactive intesti
7	133	89.9	145	A60038	vasoactive intesti
8	133	89.9	170	VRHU	vasoactive intesti
9	133	89.9	170	VRRT	vasoactive intesti
10	133	89.9	170	A60037	vasoactive intesti
11	120	81.1	55	VRGP	vasoactive intesti
12	118	79.7	165	VRCH	vasoactive intesti
13	117	79.1	28	A60303	vasoactive intesti
14	110	74.3	28	A38232	vasoactive intesti
15	107	72.3	25	JQ0361	vasoactive intesti
16	96	64.9	27	A61071	pituitary adenylat
17	96	64.9	38	A49165	pituitary adenylat
18	96	64.9	173	S34767	neuropeptides prec
19	96	64.9	175	A37786	pituitary adenylat
20	96	64.9	176	I84638	pituitary adenylat
21	96	64.9	176	A34044	pituitary adenylat
22	96	64.9	195	I50456	pituitary adenylat
23	90	60.8	38	A61070	pituitary adenylat
24	80	54.1	35	HWGHD	exendin-2 - Gila m
25	78	52.7	38	HWGHS	exendin-1 - Mexica
26	69	46.6	103	A41410	somatoliberin prec
27	68	45.9	104	A32731	somatoliberin prec
28	60	40.5	27	SECH	secretin - chicken
29	59	39.9	44	RHBS	somatoliberin - bo

30	54	36.5	44	1	RHPG	somatoliberin - pi
31	54	36.5	108	1	RHHUS	somatoliberin prec
32	53	35.8	206	2	I51301	proglucagon - chic
33	53	35.8	443	2	C70392	gamma-glutamyl pho
34	53	35.8	654	2	T08600	hypothetical prote
35	52	35.1	11	2	A32428	amine oxidase (cop
36	52	35.1	276	2	AD1860	two-component resp
37	51	34.5	1661	2	T21986	hypothetical prote
38	51	34.5	1663	2	T21993	hypothetical prote
39	50	33.8	168	2	F90095	hypothetical prote
40	50	33.8	194	2	T27608	hypothetical prote
41	50	33.8	194	2	T29172	hypothetical prote
42	49.5	33.4	330	2	F96775	hypothetical prote
43	49.5	33.4	332	1	S58283	mys-related protei
44	49	33.1	27	2	A27267	secretin - dog
45	49	33.1	310	2	B97763	hypothetical prote

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque

C/Species: Macaca mulatta (rhesus macaque)

C/Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C/Accession: B60071

R/Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A/Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences

A/Reference number: A60071; MUID:91164506; PMID:2003150

A/Accession: B60071

A/Status: protein sequence not shown

A/Molecule type: protein

A/Residues: 1-28 <YUA>

A/Cross-references: UNIPARC:UPI000002D1C0

A/Note: the sequence is identical with the human sequence

C/Superfamily: glucagon

C/Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 89.9%; Score 133; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 4.7e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N/Alternate names: VIP

C/Species: Canis lupus familiaris (dog)

C/Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C/Accession: A60304

R/Eng, J.; Pan, Y.C.E.; Kaufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A/Title: Purification and sequencing of dog and guinea pig VIP's.

A/Reference number: A60304

A/Accession: A60304

A/Molecule type: protein

A/Residues: 1-28 <ENG>

A/Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C/Superfamily: glucagon

C/Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 89.9%; Score 133; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 4.7e-13;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKYLSILN 28

Db 1 HSDAVFTDNTYRLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

N;Contains: vasoactive intestinal peptide precursor - bovine (fragments)
 C;Species: Bos primigenius taurus (cattle)
 C;Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
 R;Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A;Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A;Reference number: A61643; MUID:85027215; PMID:6549446
 A;Accession: A61643
 A;Molecule type: protein
 A;Residues: 1-27 <CAR>
 A;Cross-references: UNIPARC:UPI0000173515
 R;Carlquist, M.; Mutt, V.; Joernvall, H.
 PNAS Lett. 108, 457-460, 1979
 A;Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A;Reference number: A61644; MUID:80092152; PMID:520589
 A;Accession: A61644
 A;Molecule type: protein
 A;Residues: 28-55 <CA2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
 Biochim. Biophys. Acta 1038, 353-359, 1990
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: S09688; MUID:90254163; PMID:2340294
 A;Contents: annotation; comparison of mammalian PHI sequences
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end, duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 89.9%; Score 133; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 9.6e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYRLRKQMAVKKYLNSILN 55

RESULT 4

VRBO

N;Contains: vasoactive intestinal peptide precursor - rabbit (fragments)
 C;Species: Oryctolagus cuniculus (domestic rabbit)
 C;Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
 R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
 Peptides 11, 123-128, 1990
 A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A;Reference number: A60415; MUID:90259845; PMID:2342988
 A;Accession: B60415
 A;Molecule type: protein
 A;Residues: 1-27 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB
 A;Accession: A60415
 A;Molecule type: protein
 A;Residues: 28-55 <GOS>
 A;Cross-references: UNIPARC:UPI00000351DB
 C;Superfamily: glucagon
 C;Keywords: amidated carboxyl end, duplication; hormone; intestine; neuropeptide; vasodi
 F;1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 89.9%; Score 133; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 9.6e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C;Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
 C;Accession: B60072; A60072; G61063; A43974
 R;Boujnoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A;Reference number: A60072; MUID:91239834; PMID:2034821
 A;Accession: B60072
 A;Molecule type: protein
 A;Residues: 1-27 <BOU>
 A;Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A;Accession: A60072
 A;Molecule type: protein
 A;Residues: 28-55 <BO2>
 A;Cross-references: UNIPARC:UPI000002D1C0
 R;Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A;Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
 A;Reference number: A61063; MUID:92245116; PMID:1574609
 A;Accession: C61063
 A;Molecule type: protein
 A;Residues: 28-55 <MIY>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: hypothalamus, intestine
 R;Gaivelin, G.

Peptides 11, 703-706, 1990
 A;Title: Isolation and primary structure of VIP from sheep brain.
 A;Reference number: A43974; MUID:91045331; PMID:2235680
 A;Accession: A43974
 A;Molecule type: protein
 A;Residues: 28-55 <GAP>
 A;Cross-references: UNIPARC:UPI000002D1C0
 A;Experimental source: brain
 C;Superfamily: glucagon

Query Match 89.9%; Score 133; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 9.6e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNTYTRLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

N;Contains: vasoactive intestinal peptide precursor - pig (fragments)
 C;Species: Sus scrofa domestica (domestic pig)
 C;Date: 24-Apr-1984 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
 C;Accession: A01549; A60300; A01550; J00417; A56754; S05690
 R;Tatemoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A;Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A;Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
A;Molecule type: protein
A;Residues: 1-27 <TAT>
A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R;Tatemoto, K.
Regul. Pept. 6, 330, 1993
A;Title: PHI - a new brain-gut peptide.
A;Reference number: A60300
A;Accession: A60300
A;Molecule type: protein
A;Residues: 1-27 <TA2>
A;Cross-references: UNIPARC:UPI00000351DB
R;Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974
A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A;Reference number: A01550; MUID:74167323; PMID:4829446
A;Accession: A01550
A;Molecule type: protein
A;Residues: 28-55 <MUT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Gatvelin, G.; Andersson, M.; Dimaline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A;Title: Isolation and characterization of a variant form of vasoactive intestinal polypeptide
A;Reference number: J70417; MUID:86335763; PMID:2843830
A;Accession: J70417
A;Molecule type: protein
A;Residues: 28-58 <GAF>
A;Cross-references: UNIPARC:UPI000002B99A
A;Note: this extended form is active in a VIP assay but is probably an incompletely processed
R;Bodanszky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974
A;Reference number: A26231; MUID:74308014; PMID:4854585
A;Contents: annotation
A;Note: a 28-residue peptide having the sequence and biological activities (in two assay
R;Ichiki, Y.; Kitamura, K.; Kangawa, K.; Kawamoto, M.; Matsuo, H.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A;Reference number: A56754; MUID:93038640; PMID:1329741
A;Accession: A56754
A;Molecule type: protein
A;Residues: 1-24 <ICH>
A;Cross-references: UNIPARC:UPI0000173514
A;Experimental source: duodenum
A;Note: sequence extracted from NCBI backbone (NCBIP:114219)
R;Buscail, L.; Cauvin, A.; Gourellet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, B.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation
A;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; neuropeptide
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
P;55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly

Query Match 89.9%; Score 133; DB 1; Length 58;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||

DB 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 7

A60038
vasoactive intestinal peptide precursor - crab-eating macaque (fragment)
C;Species: Macaca fascicularis (crab-eating macaque)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey a
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038

A;Status: not compared with conceptual translation

A;Molecule type: mRNA

A;Residues: 1-145 <BEN>

A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI000017662C

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

Query Match 89.9%; Score 133; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 2.7e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
||||| ||||||| ||||||| ||||||| |||||||

DB 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127

RESULT 8

VRHU

vasoactive intestinal peptide precursor [validated] - human

N;Alternate names: Vip precursor

N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va
C;Species: Homo sapiens (man)

C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004

C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; A156988; A01

R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.

DNA 4, 293-300, 1985

A;Title: Structure of the human vasoactive intestinal polypeptide gene.

A;Reference number: A90952; MUID:86004065; PMID:3899557

A;Accession: A23296

A;Molecule type: DNA

A;Residues: 1-170 <TSU>

A;Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:g340243; PIDN

A;Note: the authors translated the codon GAA for residue 48 as Gln

R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.

Nature 304, 547-549, 1983

A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pept

A;Reference number: A93313; MUID:83271523; PMID:6571696

A;Accession: A93313

A;Molecule type: mRNA

A;Residues: 1-170 <ITO>

A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:g340277; PIDN:AAA61

R;Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 48, 1136-1141, 1987

A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage a

A;Reference number: A60205; MUID:87140054; PMID:2434617

A;Accession: A60205

A;Molecule type: mRNA

A;Residues: 78-155 <GOZ>

A;Cross-references: UNIPARC:UPI000016B2F8; GB:M11645; GB:M32162; NID:g340250; PIDN:AAA61

A;Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron

R;Linder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnusson

Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987

A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide

A;Reference number: A26361; MUID:87092456; PMID:3025882

A;Accession: A26361

A;Molecule type: DNA

A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>

A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:g340271; PIDN:AAA61288.1; PID:

A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue

R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.

J. Biol. Chem. 262, 14010-14013, 1987

A;Title: Isolation, characterization, and pharmacological actions of peptide histidine v

A;Reference number: A27419; MUID:88007645; PMID:3654650

A;Accession: A27419

A;Molecule type: protein

A;Residues: 81-122 <YIA>

A;Cross-references: UNIPARC:UPI00000351DE

R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

C;Superfamily: glucagon
F;1-27/Product: peptide histidine-isoleucine #status experimental <p27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 81.1%; Score 120; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 8e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
||||| ||||| :||| :||| :|||
Db 28 HSDALFTDITYTLRKQMAVKKYLNSVLN 55

RESULT 12
VRCH
vasoactive intestinal peptide precursor - chicken
C/Species: Gallus gallus (chicken)
C/Date: 24-Apr-1994 #sequence revision 10-Nov-1995 #text_change 09-Jul-2004
C/Acession: S47470; A91425; A90720; A01551
R/Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A/Description: Evidence for alternative splicing of the chicken VIP gene.
A/Reference number: S47470
A/Acession: S47470
A/Molecule type: mRNA
A/Residues: 1-165 <TAL>
A/Cross-references: UNIPROT:P48143; UNIPARC:UIP000002B6C3; EMBL:X80906; NID:G531364; PID:
FEBS Lett. 60, 322-326, 1975
A/Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A/Reference number: A91425; MUID:76210823; PMID:1227973
A/Acession: A91425
A/Molecule type: protein
A/Residues: 94-121 <NIL>
A/Cross-references: UNIPARC:UIP00000351E1
R/Bodanszky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A/Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t
A/Reference number: A90720
A/Contents: synthesis
A/Acession: A90720
A/Molecule type: protein
A/Residues: 107-121 <BOD>
A/Cross-references: UNIPARC:UIP0000173517
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domains: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 79.7%; Score 118; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 5.1e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 27
||||| ||||| :||| :||| :|||
Db 94 HSDALFTDNYSRFRKQMAVKKYLNSVL 120

RESULT 13
A60303
vasoactive intestinal peptide - smaller spotted catshark
C/Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C/Date: 10-Nov-1992 #sequence revision 10-Nov-1992 #text_change 09-Jul-2004
C/Acession: A60303; A60314; S07432
R/Dimaline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 16, 356, 1987
A/Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A/Reference number: A60303
A/Acession: A60303

A/Molecule type: protein
A/Residues: 1-28 <DI>
A/Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A/Note: this reference is an abstract
R/Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A/Title: Isolation and partial sequence of elasmobranch VIP.
A/Reference number: A60314; MUID:86234323; PMID:3715063
A/Accession: A60314
A/Molecule type: protein
A/Residues: 1-10 <DI>
A/Cross-references: UNIPARC:UPI000017662D
R/Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A/Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A/Reference number: S07432
A/Accession: S07432
A/Status: preliminary
A/Molecule type: protein
A/Residues: 1-28 <DI>
A/Cross-references: UNIPARC:UPI000013884B
C/Superfamily: glucagon
C/Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F/28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match 79.1%; Score 117; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 1.1e-10;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSIL 27
||||| :||:|||||:|:|
Db 1 HSDAVFTDNYSRFRKQMAVKKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N/Alternate names: VIP
C/Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C/Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
C/Accession: A38232
R/Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A/Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A/Reference number: A38232; MUID:92179271; PMID:1542675
A/Accession: A38232
A/Status: preliminary
A/Molecule type: protein
A/Residues: 1-28 <ENG>
A/Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A/Note: sequence extracted from NCBI backbone (NCBIP:87215)
C/Superfamily: glucagon
C/Keywords: duplication; intestine; neuropeptide

Query Match 74.3%; Score 110; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 1.2e-09;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;
QY 1 HSDAVFTWNYTRLRKQMAVKKYLNSILN 28
||||| :||:|||||:|:|
Db 1 HSDAVFTDNYTRLRKQMAVKKYLDSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C/Species: Gadus morhua (Atlantic cod)
C/Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
C/Accession: JQ0361
R/Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 21, 436, 1988
A/Title: Isolation and characterisation of two teleost VIP's.
A/Reference number: JQ0361

A/Accession: JQ0361
A/Molecule type: protein
A/Residues: 1-25 <THW>
A/Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C/Superfamily: glucagon
C/Keywords: duplication; intestine; neuropeptide

Query Match 72.3%; Score 107; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 2.9e-09;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
QY 1 HSDAVFTWNYTRLRKQMAVKKYLNS 25
||||| :||:|||||:|:|
Db 1 HSDAVFTDNYSRFRKQMAVKKYLNS 25

Search completed: January 25, 2006, 15:20:37
Job time : 13.25 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-6

Perfect score: 148

Sequence: 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , 'Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trenbl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	133	89.9	28	1 VIP_CANFA	P63289 canis famil
2	133	89.9	28	1 VIP_CAPHI	P63290 capra hircu
3	133	89.9	28	1 VIP_MACMU	P84488 macaca mula
4	133	89.9	28	1 VIP_SHEEP	P63291 ovis aries
5	133	89.9	72	1 VIP_PIG	P01284 sus scrofa
6	133	89.9	72	1 VIP_RABIT	P32649 oryctolagus
7	133	89.9	118	2 Q5TCY7 HUMAN	Q5tcy7 homo sapien
8	133	89.9	145	2 Q7M2Y9 MACFA	Q7m2y9 macaca fasc
9	133	89.9	153	2 Q7TSR4 9MURI	Q7tsr4 arvicanthis
10	133	89.9	169	2 Q5TCY8 HUMAN	Q5tcy8 homo sapien
11	133	89.9	170	1 VIP_BOVIN	P81401 bos taurus
12	133	89.9	170	1 VIP_HUMAN	P01282 homo sapien
13	133	89.9	170	1 VIP_MOUSE	P32648 mus musculu
14	133	89.9	170	1 VIP_RAT	P01283 rattus norv
15	133	89.9	170	2 Q5TCY9 HUMAN	Q5tcy9 homo sapien
16	133	89.9	171	2 Q9D2Z7 MOUSE	Q9d2z7 mus musculu
17	120	81.1	72	1 VIP_CAVPO	P04566 cavia porce
18	118	79.7	28	1 VIP_ALLMI	P48142 alligator m
19	118	79.7	28	1 VIP_RANRI	P81016 rana ridibu
20	118	79.7	70	2 Q4TZK3 ANAPL	Q4tzk3 anas platyr
21	118	79.7	86	2 Q4TZY9 AVES	Q4tzy9 anser anse
22	118	79.7	200	1 VIP_CHICK	P48143 gallus gall
23	118	79.7	200	1 VIP_MELGA	P45644 meleagris g
24	118	79.7	202	2 Q7ZYGB XENLA	Q7zygb xenopus lae
25	117	79.1	28	1 VIP_SCYCA	P09685 scyllorhinu
26	117	79.1	28	2 Q9PRI9 AMICA	Q9pri9 amia calva
27	117	79.1	147	2 Q4SON2 TETNG	Q4son2 tetraodon n
28	113	76.4	28	2 Q9PRN8 CARAU	Q9prn8 carassius a
29	110	74.3	28	1 VIP_DIDMA	P39089 didelphis m
30	107	72.3	25	1 VIP_GADMO	P09684 gadus moszhu
31	100	67.6	38	2 Q75W85_MISAN	Q75w85 misgurnus a

32	97	65.5	172	2	Q9DE29 BRARE	Q9de29 brachydanio
33	97	65.5	199	2	Q5XJ29 BRARE	Q5xj29 brachydanio
34	96	64.9	38	2	Q75W94 HALRO	Q75w94 halocynthia
35	96	64.9	38	2	Q8IU36 PERAM	Q8iu36 periplaneta
36	96	64.9	38	2	Q8IU37 SEPLE	Q8iu37 sepioreuthi
37	96	64.9	38	2	Q8IU38 HYDMA	Q8iu38 hydra magni
38	96	64.9	38	2	Q8IU39 DUGJA	Q8iu39 dugesia jap
39	96	64.9	38	2	Q75W87 ONCMY	Q75w87 oncorhynch
40	96	64.9	38	2	Q75W90 STELE	Q75w90 sardinops m
41	96	64.9	38	2	Q75W92 PERC	Q75w92 stephanolep
42	96	64.9	38	2	Q8AYP4 ACISC	Q8ayp4 acipenser s
43	96	64.9	38	2	Q8AYP5 TRAJP	Q8ayp5 trachurus j
44	96	64.9	62	2	Q53BI2 SPRIM	Q53bi2 gorilla gor
45	96	64.9	62	2	Q53BI3 PONPY	Q53bi3 pongo pygma

ALIGNMENTS

RESULT 1

ID	VIP_CANFA	STANDARD;	PRT;	28 AA.
AC	P63289; P04565;			
DT	13-AUG-1987 (Rel. 05, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	13-SEP-2005 (Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).			
GN	Name=VIP;			
OS	Canis familiaris (Dog).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;			
OC	Canis.			
OX	NCBI_TaxID=9615;			
RN	[1]			
RP	PROTEIN SEQUENCE.			
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;			
RA	Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;			
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs."			
RL	Peptides 7 Suppl. 1:17-20(1986).			
CC	FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.			
CC	SUBCELLULAR LOCATION: Secreted.			
CC	SIMILARITY: Belongs to the glucagon family.			
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.			
CC	PIR: A60304; A60304.			
DR	HSSP; P18509; 1GBA.			
DR	Ensembl; ENSCAFG0000000538; Canis familiaris.			
DR	InterPro; IPR000532; Glucagon.			
DR	Pfam; PF00123; Hormone.2; 1.			
DR	PRINTS; PR00275; GLUCAGON.			
DR	SMART; SM00070; GLUCA; 1.			
DR	PROSITE; PS00260; GLUCAGON; 1.			
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.			
FT	MOD RES 28			
SQ	SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;			

Query Match		89.9%;	Score 133;	DB 1;	Length 28;
Best Local Similarity		96.4%;	Pred. No. 2.3e-12;		
Matches		27;	Conservative	0;	Mismatches 1;
					Indels 0;
					Gaps 0;
Oy 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28					
Db 1 HSDAVFTWNTYRLRKQMAVKYKLSILN 28					

```

RESULT 2
VIP_CAPHI
ID VIP_CAPHI STANDARD; PRT; 28 AA.
AC P63290; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).
GN Name=VIP;
OS Capra hircus (Goat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Capra.
OC NCBI_TaxID=9925;
[1]
RN
RP PROTEIN SEQUENCE.
RA MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RX Eng J., Du B.-H., Raufman J.-P., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig VIPs.";
RL Peptides 7 Suppl. 1:17-20(1986).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
-----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation at the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
-----
CC HSSP: P18509; 1GEA.
DR InterPro: IPR000532; Glucagon.
DR Pfam: PF00123; Hormone_2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
DR KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313F573FF6F3F CRC64;
Query Match 89.9%; Score 133; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTWNTYRLRKQWAVKKYLSILN 28
| | | | | | | | | | | | | | | | | | | |
DB 1 HSDAVFTDNTYRLRKQWAVKKYLSILN 28
| | | | | | | | | | | | | | | | | | | |
RESULT 3
VIP_MACMU
ID VIP_MACMU STANDARD; PRT; 28 AA.
AC P84488;
DT 13-SEP-2005 (Rel. 48, Created)
DT 13-SEP-2005 (Rel. 48, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).
GN Name=VIP;
OS Macaca mulatta (Rhesus macaque).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecoidea; Cercopithecinae; Macaca.
OC NCBI_TaxID=9544;
[1]
RN
RP PROTEIN SEQUENCE.
RA MEDLINE=91164506; PubMed=2003150; DOI=10.1016/0167-0115(91)90005-2;
RX Yu J.-H., Xin Y., Eng J., Yalow R.S.;

```


RT "Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.";

RL Peptides 11:123-128(1990).

CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

CC -!- FUNCTION: PHI also causes vasodilation.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.

CC -!- SIMILARITY: Belongs to the glucagon family.

CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.

CC -----

DR HSSP; P18509; 1GEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

KW Amidation; Cleavage on pair of basic residues;

KW Direct protein sequencing; Glucagon family; Hormone.

FT PEPTIDE 1 27 Intestinal peptide PHI-27.

FT MOD_RES 45 72 Vasoactive intestinal peptide.

FT MOD_RES 27 27 Isoleucine amide.

FT MOD_RES 72 72 Asparagine amide.

FT NON_TER 1 1

FT NON_TER 72 72

SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 89.9%; Score 133; DB 1; Length 72;

Best Local Similarity 96.4%; Pred. No. 6.3e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28

DB 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72

RESULT 7

Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.

ID Q5TCY7

DT 01-FEB-2005 (TrEMBLrel. 29, Created)

DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)

DE Vasoactive intestinal peptide (Fragment).

GN Name=VIP; ORFNames=RP4-546K19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

OX NCBI_TaxID=9606;

FN [1]

RP NUCLEOTIDE SEQUENCE.

RA Johnson C.

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

DR EMBL; AL133356; CA121766.1; -; Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUC; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 89.9%; Score 133; DB 2; Length 118;

Best Local Similarity 96.4%; Pred. No. 1.1e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28

DB 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72

RESULT 7

Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.

ID Q5TCY7

DT 01-FEB-2005 (TrEMBLrel. 29, Created)

DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)

DE Vasoactive intestinal peptide (Fragment).

GN Name=VIP; ORFNames=RP4-546K19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

OX NCBI_TaxID=9606;

FN [1]

RP NUCLEOTIDE SEQUENCE.

RA Johnson C.

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

DR EMBL; AL133356; CA121766.1; -; Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUC; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 89.9%; Score 133; DB 2; Length 118;

Best Local Similarity 96.4%; Pred. No. 1.1e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28

DB 45 HSDAVFTDNYTLRKQMAVKKYLNSILN 72

RESULT 7

Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.

ID Q5TCY7

DT 01-FEB-2005 (TrEMBLrel. 29, Created)

DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)

DE Vasoactive intestinal peptide (Fragment).

GN Name=VIP; ORFNames=RP4-546K19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

OX NCBI_TaxID=9606;

FN [1]

RP NUCLEOTIDE SEQUENCE.

RA Johnson C.

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

DR EMBL; AL133356; CA121766.1; -; Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUC; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

Query Match 89.9%; Score 133; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 1.3e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28

DB 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127

RESULT 8

Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.

ID Q7M2Y9

DT 01-MAR-2004 (TrEMBLrel. 26, Created)

DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal peptide precursor (Fragment).

OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Cercopithecoidea; Cercopithecinae; Macaca.

OX NCBI_TaxID=9541;

FN [1]

RP NUCLEOTIDE SEQUENCE.

RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N; Benson D.L.; Isackson P.J.; Jones E.G.; "in situ hybridization reveals VIP precursor mRNA-containing neurons in monkey and rat neocortex.";

RL Brain Res. Mol. Brain Res. 9:169-174(1991).

DR PIR; A60038; A60038.

DR HSSP; P18509; 1GEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

FT NON_TER 145 145

SQ SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;

Query Match 89.9%; Score 133; DB 2; Length 145;

Best Local Similarity 96.4%; Pred. No. 1.3e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28

DB 100 HSDAVFTDNYTLRKQMAVKKYLNSILN 127

RESULT 9

Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.

ID Q7TSR4

DT 01-OCT-2003 (TrEMBLrel. 25, Created)

DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal polypeptide (Fragment).

OS Arvicanthus ansorgei.

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muridae; Murinae; Arvicanthis.

OX NCBI_TaxID=204747;

FN [1]

RP NUCLEOTIDE SEQUENCE.

RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pevet P.; Masson-Pevet M.; Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.

DR EMBL; AY225375; AAP15167.1; -; mRNA.

DR HSSP; P18509; 1GEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone 2; 2.

DR PRINTS; PR00275; GLUCAGON.

```
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FT NON TER 1
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

  Query Match      89.9%; Score 133; DB 2; Length 153;
  Best Local Similarity 96.4%; Pred. No. 1.4e-11;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRLKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 108 HSDAVFTDNYTLRLKQMAVKKYLNSILN 135

RESULT 10
Q5TCY8_HUMAN
ID Q5TCY8_HUMAN PRELIMINARY; PRT; 169 AA.
AC Q5TCY8_
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-002;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBSJ databases.
DR EMBL; AL133356; CA121765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEF47132C3 CRC64;

  Query Match      89.9%; Score 133; DB 2; Length 169;
  Best Local Similarity 96.4%; Pred. No. 1.5e-11;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRLKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 124 HSDAVFTDNYTLRLKQMAVKKYLNSILN 151

RESULT 11
VIP_BOVIN
ID VIP_BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8M177;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=22092342; PubMed=12097482;
RA Hamelink C., Lee H.-W., Chen Y., Grimaldi M., Eiden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RT J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duodenum;
```

```
RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family.";
RT Eur. J. Biochem. 144:243-247(1984).
RL [3]
RN RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
CC EMBL; AF503910; AAM28152.1; -; mRNA.
DR HSSP; P18509; 1GEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25 Potential.
FT PROPEP 26 79 Intestinal peptide PHI-27.
FT PEPTIDE 81 107 Vasoactive intestinal peptide.
FT PROPEP 111 122 Vasoactive intestinal peptide.
FT PEPTIDE 125 152 Isoleucine amide (G-108 provides amide group).
FT PROPEP 156 170 Asparagine amide (G-153 provides amide group).
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
SQ SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

  Query Match      89.9%; Score 133; DB 1; Length 170;
  Best Local Similarity 96.4%; Pred. No. 1.6e-11;
  Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRLKQMAVKKYLNSILN 28
    ||||| ||||| ||||| ||||| |||||
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152

RESULT 12
VIP_HUMAN
ID VIP_HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHV-42; Intestinal peptide PHM-27 (peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
```



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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InVDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122 Intestinal peptide PHV-42.
FT PEPTIDE 81 107 Intestinal peptide PHM-27.
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152 Methionine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group)
FT CONFLICT 96 97 Qu -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19169 MW; 938C0177F89508FD CRC64;

Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27);
DE vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
DE polypeptide]].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridea; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
[1]
RN RATTOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
[2]
RN NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

```

"High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes.";

-|- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

-|- FUNCTION: PHM also causes vasodilation.

-|- SUBCELLULAR LOCATION: Secreted.

-|- SIMILARITY: Belongs to the glucagon family.

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EMBL; X74297; CAA52350.1; -; Genomic DNA.

PIR; A60037; A60037.

HSSP; P18509; IGEA.

Ensembl; ENSMUSG000000019772; Mus musculus.

GO; GO:0005615; C:extracellular space; TAS.

MGI; MGI:98933; Vip.

InterPro; IPR000532; Glucagon.

Pfam; PF00123; Hormone_2; 2.

PRINTS; PR00275; GLUCAGON.

PROSITE; PS00260; GLUCAGON; 2.

Amidation; Cleavage on pair of basic residues; Glucagon family; Glycoprotein; Hormone; Signal.

SIGNAL 1 21 By similarity.

PROPEP 22 79

PEPTIDE 81 122 Intestinal peptide PHI-42 (By similarity).

PEPTIDE 81 107 Intestinal peptide PHI-27.

PEPTIDE 125 152 Vasoactive intestinal peptide.

PROPEP 156 170

MOD_RES 107 107

MOD_RES 152 152 Isoleucine amide (G-108 provides amide group).

CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).

SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNYTLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
ID_VIP_RAT
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27);
DE vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridea; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
[1]
RN NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RX MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RA Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
RL precursor mRNA evolution between human and rat.";
RN FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=4851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RL polypeptide (VIP) in rat and mouse.";
RN Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
RL basophilic leukemia cells.";
RN J. Biol. Chem. 263:9083-9086(1988).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHI also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRP.
DR HS8P; P18509; IGEA.
DR Ensembl; ENSRNOG0000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
DR AMIDATION; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL. 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT PEPTIDE 81 107 Intestinal peptide PHV-42 (By
FT PEPTIDE 125 152 similarity).
FT PROPEP 156 170 Intestinal peptide PHI-27.
FT MOD_RES 107 170 Vasoactive intestinal peptide.
FT -----
FT MOD_RES 107 170 Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68 N-linked (GlcNAc...) (Potential).
FT CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 89.9%; Score 133; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152
```

```
RESULT 15
QSTCY9_HUMAN
ID QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo.
OX NCBT_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 89.9%; Score 133; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 1.6e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTWNTYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNTYRLRKQMAVKKYLNSILN 152

Search completed: January 25, 2006, 15:18:40
Job time : 77 secs
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GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRRLRQMAVKYKLYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A Geneseq 21.*

- 1: geneseqp1980s.*
- 2: geneseqp1990s.*
- 3: geneseqp2000s.*
- 4: geneseqp2001s.*
- 5: geneseqp2002s.*
- 6: geneseqp2003as.*
- 7: geneseqp2003bs.*
- 8: geneseqp2004s.*
- 9: geneseqp2005s.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	143	100.0	28	5	Abg94069 Human vas
2	140	97.9	28	5	Abg94066 Human vas
3	139	97.2	28	5	Abg94068 Human vas
4	138	96.5	28	5	Abg94067 Human vas
5	137	95.8	28	1	Aap10172 VIP. 3/20
6	137	95.8	28	1	Aap10139 Sequence
7	137	95.8	28	2	Aar34943 Porcine V
8	137	95.8	28	2	Aar40272 Native VI
9	137	95.8	28	2	Aar53111 Bronchodi
10	137	95.8	28	2	Aar53109 Bronchodi
11	137	95.8	28	2	Aar53110 Bronchodi
12	137	95.8	28	2	Aar87092 Vasoacti
13	137	95.8	28	2	Aar83785 VIP. 2/19
14	137	95.8	28	2	Aar97810 Vasoacti
15	137	95.8	28	2	Aar93023 Human glu
16	137	95.8	28	2	Aaw65188 Vasoacti
17	137	95.8	28	2	Aaw06120 Human VIP
18	137	95.8	28	2	Aaw06119 Mouse VIP
19	137	95.8	28	2	Aaw06114 Rabbit VI
20	137	95.8	28	2	Aaw06113 Macaque V
21	137	95.8	28	2	Aaw06121 Pig VIP p
22	137	95.8	28	2	Aaw06122 Goat VIP
23	137	95.8	28	2	Aaw06115 Dog VIP p
24	137	95.8	28	2	Aaw06112 Sheep VIP

25	137	95.8	28	2	AAW37791	Vasoacti
26	137	95.8	28	2	AAW71677	Vasoacti
27	137	95.8	28	2	AAV30769	Vasoacti
28	137	95.8	28	2	AAV44196	Human vas
29	137	95.8	28	3	AAV94560	Vasoacti
30	137	95.8	28	4	AAH85707	Peptide h
31	137	95.8	28	4	AAH85710	Peptide h
32	137	95.8	28	4	AAH91279	Vasoacti
33	137	95.8	28	4	AAH91278	Vasoacti
34	137	95.8	28	4	AAE12028	Porcine v
35	137	95.8	28	4	AAH37111	Human vas
36	137	95.8	28	4	AAH70459	Vasoacti
37	137	95.8	28	4	AAH50845	Human pro
38	137	95.8	28	4	AAU09653	Porcine i
39	137	95.8	28	4	AAH45614	Native va
40	137	95.8	28	5	AAE19604	Human ste
41	137	95.8	28	5	AAE19627	Human vas
42	137	95.8	28	5	AAE19603	Human vas
43	137	95.8	28	5	ABB06677	Mammalian
44	137	95.8	28	5	AAU85989	Modified
45	137	95.8	28	5	AAU97783	Tumour sp

ALIGNMENTS

RESULT 1

ABG94069

ID ABG94069 standard; peptide; 28 AA.

XX AC ABG94069;

DT 27-NOV-2002 (first entry)

XX XX

DE Human vasoactive intestinal polypeptide (VIP) analogue #117.

XX XX

Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva; vagina; vaginal atrophy; pain; intercourse; vaginal itching; vaginal dryness; sexual desire enhancement; female genitalia; frigidity; sexual aversion; menopausal state; post-menopausal state; sexual desire; sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus; peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia; vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX OS Unidentified.

XX OS

PN US2002099003-A1.

XX XX

PD 25-JUL-2002.

XX XX

PF 13-AUG-2001; 2001US-00929818.

XX XX

PR 28-OCT-1997; 97US-00959057.

PR 28-OCT-1997; 97US-00959064.

PR 27-OCT-1998; 98US-00181316.

PR 04-FEB-2000; 2000US-00498522.

XX XX

PA (WILS/) WILSON L F.

PA (PLAC/) PLACE V A.

XX XX

PI Wilson LF, Place VA;

XX XX

DR WPI; 2002-697729/75.

XX XX

PT Treating sexual dysfunction in females comprises administering vasoactive intestinal polypeptide or against to vagina and/or vulvar region.

XX XX

PS Claim 19; Page; 19pp; English.

XX XX

CC The invention relates to a method for treating sexual dysfunction in females comprising administering a formulation comprising a vasoactive agent comprising a vasoactive intestinal polypeptide and/or agonist to the vagina and/or vulvar region. The method is used for preventing

CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 SQ Sequence 28 AA;

Query Match 100.0%; Score 143; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 2.3e-12;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||:|||||:|||||:|||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 2
 ABG94066
 ID ABG94066 standard; peptide; 28 AA.
 XX
 AC ABG94066;
 XX
 DT 27-NOV-2002 (first entry)
 XX
 DE Human vasoactive intestinal polypeptide (VIP) analogue #114.

KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.
 OS
 XX US2002099003-A1.
 PN
 XX 25-JUL-2002.

XX 13-AUG-2001; 2001US-00929818.
 XX
 XX 28-OCT-1997; 97US-00959057.
 PR 28-OCT-1997; 97US-00959057.
 PR 27-OCT-1998; 98US-00181316.
 PR 04-FEB-2000; 2000US-00498522.

XX (WILS/) WILSON L F.
 PA (PLAC/) PLACE V A.
 XX
 XX Wilson LF, Place VA;
 PI
 XX WPI; 2002-697729/75.

XX Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.

XX Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to

CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 SQ Sequence 28 AA;

Query Match 97.9%; Score 140; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 5.9e-12;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 |||||:|||||:|||||:|||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 3
 ABG94068
 ID ABG94068 standard; peptide; 28 AA.

XX
 AC ABG94068;
 XX

DT 27-NOV-2002 (first entry)
 XX

DE Human vasoactive intestinal polypeptide (VIP) analogue #116.

KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.

XX Unidentified.

OS
 XX US2002099003-A1.

PN
 XX 25-JUL-2002.

XX 13-AUG-2001; 2001US-00929818.

XX 28-OCT-1997; 97US-00959057.

PR 28-OCT-1997; 97US-00959057.

PR 27-OCT-1998; 98US-00181316.

PR 04-FEB-2000; 2000US-00498522.

XX (WILS/) WILSON L F.

PA (PLAC/) PLACE V A.

XX
 XX Wilson LF, Place VA;
 PI

XX WPI; 2002-697729/75.

XX Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.

XX Claim 19; Page; 19pp; English.

XX The invention relates to a method for treating sexual dysfunction in
 CC females comprising administering a formulation comprising a vasoactive

CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 XX Sequence 28 AA;

Query Match 97.2%; Score 139; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 8.1e-12;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||

RESULT 4
 ABG94067
 ID ABG94067 standard; peptide; 28 AA.
 XX AC ABG94067;
 XX DT 27-NOV-2002 (first entry)
 XX DE Human vasoactive intestinal polypeptide (VIP) analogue #115.
 XX KW Vasoactive intestinal polypeptide; VIP; female sexual dysfunction; vulva;
 KW vagina; vaginal atrophy; pain; intercourse; vaginal itching;
 KW vaginal dryness; sexual desire enhancement; female genitalia; frigidity;
 KW sexual aversion; menopausal state; post-menopausal state; sexual desire;
 KW sexual activity; multiple sclerosis; atherosclerosis; diabetes mellitus;
 KW peripheral neuropathy; autonomic neuropathy; anorgasmia; hypoxia;
 KW vaginal muscle tone; vaginal lubrication; collagen misdeposition.
 XX OS Unidentified.
 XX PN US2002099003-A1.
 XX PD 25-JUL-2002.
 XX PF 13-AUG-2001; 2001US-00929818.
 XX PR 28-OCT-1997; 97US-00959057.
 XX PR 28-OCT-1997; 97US-00959064.
 XX PR 27-OCT-1998; 98US-00181316.
 XX PR 04-FEB-2000; 2000US-00498522.
 XX KW (WILSON) WILSON L F.
 XX PA (PLAC/) PLACE V A.
 XX PI Wilson LF, Place VA;
 XX DR WPI; 2002-697729/75.
 XX PT Treating sexual dysfunction in females comprises administering vasoactive
 PT intestinal polypeptide or against to vagina and/or vulvar region.
 XX Claim 19; Page; 19pp; English.
 XX The invention relates to a method for treating sexual dysfunction in

CC females comprising administering a formulation comprising a vasoactive
 CC agent comprising a vasoactive intestinal polypeptide and/or agonist to
 CC the vagina and/or vulvar region. The method is used for preventing
 CC vaginal atrophy and pain during intercourse, for treating vaginal itching
 CC and dryness, for enhancing sexual desire and responsiveness in females
 CC and for maintaining improvement of the tissue health of the female
 CC genitalia. The method is also used for treating persistent or recurrent
 CC deficiency or absence of sexual fantasies and desire for sexual activity,
 CC frigidity, sexual aversion, menopausal or post-menopausal state, multiple
 CC sclerosis, atherosclerosis, peripheral neuropathy, autonomic neuropathy,
 CC diabetes mellitus, substance-induced decreases in sexual desire and
 CC responsiveness and primary and secondary anorgasmia. The formulation
 CC improves vaginal muscle tone and tissue health, increases vaginal
 CC lubrication and minimises collagen misdeposition resulting from hypoxia.
 CC This sequence represents a human vasoactive intestinal polypeptide (VIP)
 CC analogue with agonist and/or antagonist activity. Note: The present
 CC sequence is not featured in the printed specification but was derived
 CC from the wild-type peptide shown in ABG93952
 XX
 XX Sequence 28 AA;

Query Match 96.5%; Score 138; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.1e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||
 Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
 |||||:|||||

RESULT 5
 AAP10172
 ID AAP10172 standard; peptide; 28 AA.
 XX AC AAP10172;
 XX DT 25-MAR-2003 (revised)
 XX DT 21-DEC-1992 (first entry)
 XX DE VIP.
 XX KW Vasoactive intestinal polypeptide;
 KW allergic asthma. chemical mediator isolation-inhibiting action.
 XX OS Homo sapiens.
 XX PN JP56128721-A.
 XX PD 08-OCT-1991.
 XX PF 12-MAR-1980; 80JP-00030308.
 XX PR 12-MAR-1980; 80JP-00030308.
 XX PA (EISA) EISAI CO LTD.
 XX DR WPI; 1981-86052D/47.
 XX PT Antiallergic agent comprises peptide - contg. 28 amino acid units, is
 XX active against e.g. bronchial asthma and hay fever.
 XX PS Claim 1; Page 1; 3pp; Japanese.
 XX The sequence given can be used as the active component in an antiallergic
 CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator
 CC isolation-inhibiting action and is effective for therapy and prevention
 CC of various allergic diseases, such as allergic rhinitis, bronchial
 CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis
 CC etc. Since it also has specific bronchial smooth muscle relaxant action,
 CC it is esp. useful for treating and preventing bronchial and allergic
 CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PA field.)
 XX

SQ Sequence 28 AA;
 Query Match 95.8%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 6
 ID AAP71039 standard; peptide; 28 AA.
 AC AAP71039;
 XX
 XX 03-OCT-2002 (revised)
 DT 05-APR-1991 (first entry)
 XX
 XX Sequence of active ingredient in hair growth promoting compen.
 DE
 XX Vasoactive intestinal tract polypeptide; digestive tract polypeptide;
 KW hair growth promoter.
 XX
 XX Synthetic.
 OS
 XX EP225639-A.
 PN
 XX 16-JUN-1987.
 PD
 XX 10-DEC-1986; 86EP-00117190.
 PF
 XX 10-DEC-1985; 85JP-00276099.
 PR
 XX (MEIJ) MEIJI SEIKA KAISHA.
 PA
 XX Yanaiharu N, Watanabe S, Kasai M, Sato T, Kikkoji T;
 PI
 XX WPI; 1987-164873/24.
 DR
 XX Hair growth promoting compans. - contg. vasoactive intestinal polypeptide
 PT and carrier.
 XX
 XX Claim 1; Page 8; 10pp; English.
 PS
 XX When applied to the skin, the peptide causes a local increase in blood
 CC flow and promotes hair growth. It is the natural peptide known as
 CC vasoactive intestinal polypeptide which has been isolated from the
 CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)
 CC
 SQ Sequence 28 AA;
 Query Match 95.8%; Score 137; DB 1; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 7
 ID AAR34943 standard; peptide; 28 AA.
 AC AAR34943;
 XX
 XX 25-MAR-2003 (revised)
 DT 28-JUL-1993 (first entry)
 XX
 XX Porcine VIP.
 DE
 XX

KW Vasoactive intestinal peptide; asthma; bronchodilation activity;
 KW bronchiotracheal constrictive disorders.
 XX
 XX Sus scrofa.
 XX
 XX EP536741-A2.
 PN
 XX 14-APR-1993.
 PD
 XX 08-OCT-1992; 92EP-00117185.
 XX
 XX 11-OCT-1991; 91US-00773747.
 PR
 XX (HOFF) HOFFMANN LA ROCHE & CO AG F.
 PA
 XX Bolin DR, Odonnell M;
 XX WPI; 1993-118996/15.
 DR
 XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
 PT the treatment of bronchotracheal constructive disorders e.g. asthma.
 PT
 XX Disclosure; Page 65; 141pp; English.
 PS
 XX The sequence is that of porcine vasoactive intestinal peptide (VIP) as
 CC claimed in EP-325044. The peptide sequence was used to design cyclic
 CC analogues of VIP which have enhanced bronchodilation activity without any
 CC observable side effects such as cardiovascular side effects. The
 CC bronchodilation produced by the analogues can be sustained for more than
 CC two hours. The analogues may be used for the treatment of bronchotracheal
 CC constrictive disorders, e.g. asthma. See also R83944-5016. (Updated on 25
 CC -MAR-2003 to correct PN field.)
 CC
 XX Sequence 28 AA;
 SQ
 Query Match 95.8%; Score 137; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.5e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
 Db 1 HSDAVFTDNYTRLRKQMAVKKYLNSILN 28
 RESULT 8
 ID AAR40272 standard; protein; 28 AA.
 AC AAR40272;
 XX
 XX 25-MAR-2003 (revised)
 DT 09-FEB-1994 (first entry)
 DT
 XX Native VIP.
 DE
 XX Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
 KW side effect; bronchoconstrictive disorder; asthma.
 KW
 XX Sus scrofa.
 XX
 XX Key Location/Qualifiers
 FH Modified-site 28
 FT /note= "C-terminal is amidated"
 FT
 XX US5234907-A.
 PN
 XX 10-AUG-1993.
 PD
 XX 24-APR-1991; 91US-00690300.
 PF
 XX 30-JUN-1989; 89US-00374503.
 XX
 XX (HOFF) HOFFMANN LA ROCHE INC.
 PA

XX Bolin DR;
XX WPI; 1993-264645/33.
XX New vasoactive intestinal peptide analogues - are potent bronchodilators
PT without cardiovascular side effects, used for treating, e.g. asthma.
XX Disclosure; Page 25-26; 66pp; English.
XX VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78; generic
CC formulae; AAR40279-364; examples). The VIP analogues are potent
CC bronchodilators and have no cardiovascular side effects. They are used
CC for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
CC on 25-MAR-2003 to correct PF field.)
XX
XX Sequence 28 AA;
SQ
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 9
AAR53111
ID AAR53111 standard; peptide; 28 AA.
XX
AC AAR53111;
DT 20-DEC-1994 (first entry)
DE Bronchodilator peptide #21.
XX
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 10 /note= "D-form residue"
FT Misc-difference 22 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
FT
PN JP06092991-A.
XX
XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX 28-FEB-1991; 91JP-00034335.
XX (DAIL) DAICEL CHEM IND LTD.
PA (MEIJ) MEIJI SEIKA KAISHA.
XX
XX WPI; 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
PT bronchodilators.
PN
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
XX The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group

CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 10
AAR53109
ID AAR53109 standard; peptide; 28 AA.
XX
AC AAR53109;
XX
DT 20-DEC-1994 (first entry)
DE Bronchodilator peptide #19.
XX
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 10 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
FT
PN JP06092991-A.
XX
XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX 28-FEB-1991; 91JP-00034335.
XX (DAIL) DAICEL CHEM IND LTD.
PA (MEIJ) MEIJI SEIKA KAISHA.
XX
XX WPI; 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
PT bronchodilators.
PN
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
XX The sequences given in AAR53091-111 are synthetic peptides based on
CC vasoactive intestinal peptide (VIP) which have the activity of relaxing
CC the smooth muscle selectively and are only low toxic-non- toxic to
CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group
CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 11

AAR53110
ID AAR53110 standard; peptide; 28 AA.
XX
AC AAR53110;
XX
DT 20-DEC-1994 (first entry)
XX
DE Bronchodilator peptide #20.
XX
KW Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 22 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
FT
FT
XX JP06092991-A.
XX
XX
PD 05-APR-1994.
XX
XX 28-FEB-1991; 91JP-00034335.
XX
XX 28-FEB-1991; 91JP-00034335.
XX
XX (DAI) DAICEL CHEM IND LTD.
XX (MEIJ) MEIJI SEIKA KAISHA.
XX
XX WPI; 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
XX The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
XX capable of bonding to the amino acid at the carboxy terminal through a
XX carboxyl group and fixing the peptide chain during the synthesis
XX
XX Sequence 28 AA;
SQ
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11; Indels 0; Gaps 0;
Matches 27; Conservative 0; Mismatches 1;
QY 1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28
DB 1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28
RESULT 12
AAR87092
ID AAR87092 standard; peptide; 28 AA.
XX
AC AAR87092;
XX
XX 06-JUN-1996 (first entry)
DT
XX Vasoactive intestinal peptide, forms part of gene transfer complex.
DE
XX Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
KW Gene therapy; vaccine.
XX
XX Sus scrofa.
XX
XX Key Location/Qualifiers
FH

FT Modified-site 28 /note= "amidated"
XX
XX FR2719316-A1.
PN
XX 03-NOV-1995.
PD
XX 28-APR-1994; 94FR-00005174.
PF
XX 28-APR-1994; 94FR-00005174.
PR
XX (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
PA
XX Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
PI WPI; 1995-375617/49.
XX
XX New nucleic acid complexes with cationic polymers - useful for genetic
XX transformation of cells.
FT
XX Claim 11; Page 43; 58pp; French.
PS
XX In novel complexes of negatively-charged nucleic acids and positively-
XX charged polymers, the polymers comprise monomer subunits bearing NH3+
XX groups, at least 10% of which are replaced by uncharged amino groups
XX bearing a substituent that has at least one -OH group and is not recognised
XX by cell membrane receptors; the side-chain groups of the polymer (i.e.
XX the NH3+ and/or OH groups) may be substid. by a group that is recognised
XX by a cell membrane receptor, provided that at least 30% of the NH3+
XX nucleic acid sequences into particular cell types, depending on the
XX identity of the cell membrane receptor ligands involved, e.g. for gene
XX therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
XX antigens recognised by lectins, natural metabolites (such as biotin,
XX tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
XX intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
XX peptide hormones such as alpha-MSH, chemotactic factors and integrin
XX ligands)
XX
XX Sequence 28 AA;
SQ
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28
DB 1 HSDAVFTDNYRLRKQMAVKYKILNSILN 28
RESULT 13
AAR83785
ID AAR83785 standard; peptide; 28 AA.
XX
XX AAR83785;
AC
XX 27-FEB-1996 (first entry)
DT
XX VIP.
DE
XX VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
KW secretin; nervous system; digestive system; smooth muscle; relaxant;
KW bronchial asthma; impotence; therapy.
XX
XX Sus scrofa.
XX
XX Key Location/Qualifiers
FH Misc-difference 29 /note= "amidated"
FT
XX EP663406-A1.
PN
XX 19-JUL-1995.
PD

XX 19-DEC-1994; 94EP-00120126.
XX 20-DEC-1993; 93JP-00319815.
XX (SANW) SANWA KAGAKU KENKYUSHO CO.
XX Noda H, Yamakawa H, Yoshina S, Iehida T, Tomiya N;
XX WPI; 1995-247502/33.
XX New modified form of vasoactive intestinal polypeptide - with C-terminal
XX substd. amide residue, has greater in vivo stability and persistence,
XX useful for treating asthma and impotence.
XX Disclosure; Page 3; 16pp; English.
XX This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX a peptide hormone that shows smooth muscle relaxant activity. The
XX structure of VIP is similar to that of the other peptides in the glucagon
XX -secretin family, to which it belongs. VIP is present in the nervous
XX system and the digestive system tracts. It is also found in the lungs of
XX normal patients (however, it is not found in the lungs of people
XX suffering from bronchial asthma). The sequences shown in AAR83784 and
XX AAR83786 are analogues of this sequence. These analogues are found to be
XX resistant to protease digestion. The analogues can be used to treat
XX asthma (by inhalation) and impotence (percutaneously). Compared to
XX natural VIP, the analogue sequences have better in vivo stability. The
XX analogue sequences are also more persistent than natural VIP and have
XX excellent affinity for biological membranes
XX Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 14
AAR97810
ID AAR97810 standard; peptide; 28 AA.
AC AAR97810;
XX 22-AUG-1996 (first entry)
XX Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX burn; decubitis; diabetes; ulcer; bed sore; pressure sore.
XX Synthetic.
XX Key Location/Qualifiers
XX Modified-site 28 /note= "amidated"
XX JP08040926-A.
XX 13-FEB-1996.
XX 03-AUG-1994; 94JP-00182457.
XX 03-AUG-1994; 94JP-00182457.
XX (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
XX WPI; 1996-157021/16.
XX

PT Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
XX active component.
XX Claim 1; Page 2; 4pp; Japanese.
XX Vasoactive intestinal peptide and related compounds are known to have
XX strong vasodilatory activity. They have now been found to be effective in
XX the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
XX diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
XX novel skin ulcer remedy
XX Sequence 28 AA;
Query Match 95.8%; Score 137; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
RESULT 15
AAR93023
ID AAR93023 standard; protein; 28 AA.
XX AAR93023;
XX 09-AUG-1996 (first entry)
XX Human glucagon degrading enzyme - VIP substrate.
XX Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
XX vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
XX amplification; polymerase chain reaction; probe; expression vector;
XX eukaryote; SV40 promoter; COS-7.
XX Synthetic.
XX Key Location/Qualifiers
XX Cleavage-site 17..18
XX Modified-site 28 /note= "contains C-terminal amide group"
XX JP08023972-A.
XX 30-JAN-1996.
XX 19-JUL-1994; 94JP-00187936.
XX 19-JUL-1994; 94JP-00187936.
XX (SUNR) SUNTORY LTD.
XX WPI; 1996-133414/14.
XX New glucagon decomposing enzyme, and DNA encoding it - for specifically
XX cleaving glucagon and vasoactive intestinal peptide, in the prevention
XX and treatment of diseases caused by excess glucagon and VIP.
XX Claim 1; Page 2; 18pp; Japanese.
XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
XX isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
XX The enzyme has a mol. wt. 83 kD, a pH optimum of 5.8 and catalyses the
XX cleavage of glucagon, vasoactive intestinal peptide and selectin
XX (AAR93022-4). The gene encoding the enzyme was isolated by screening the
XX library with an anti-GDE peptide antibody, amplifying the inserts with
XX the primers AAT18903-4 and probing the fragments with the probe AAT18905.
XX This screening resulted in the full length clone designated lambda GD84-
XX 2. The coding region of the clone was subsequently PCR amplified by the
XX primers AAT11576-7 and inserted into the eukaryotic expression vector
XX pKDCR under control of the SV40 promoter for production of the protein in

CC COS-7 cells. The protein is useful in preventing and treating diseases
CC characterised by an excess of glucagon or vasoactive intestinal peptide

XX

Sequence 28 AA;

Sequence 28 AA;

Query Match 95.8%; Score 137; DB 2; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.5e-11;

Seq. Local Similarity	Conservative	Mismatches	Indels	Gaps
Matches	27	0	1	0

1 HSDAVFTDNYRRLRKQMAVKYLSILN 28

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Search completed: January 25, 2006, 15:08:20

search completed: 0.000000
Job time : 77.875 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-7
Perfect score: 143
Sequence: 1 HSDAVFTDNYRRLKQMAVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/PC_TUS_COMB.pep:*
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6: /cgn2_6/ptodata/1/iaa/backfiles.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	143	100.0	28	2	US-09-528-200-7
2	137	95.8	28	1	US-07-690-300B-1
3	137	95.8	28	1	US-07-676-987A-1
4	137	95.8	28	1	US-07-868-906-1
5	137	95.8	28	1	US-08-201-092-1
6	137	95.8	28	1	US-07-924-054-11
7	137	95.8	28	1	US-08-243-082-1
8	137	95.8	28	1	US-08-361-443-1
9	137	95.8	28	1	US-08-288-681A-1
10	137	95.8	28	1	US-07-776-272-26
11	137	95.8	28	1	US-08-308-729-1
12	137	95.8	28	1	US-08-062-472B-40
13	137	95.8	28	1	US-08-171-701A-1
14	137	95.8	28	1	US-08-741-678-1
15	137	95.8	28	1	US-08-519-180-2
16	137	95.8	28	1	US-08-414-424-1
17	137	95.8	28	1	US-08-413-708B-1
18	137	95.8	28	1	US-08-818-253-37
19	137	95.8	28	1	US-08-897-624-1
20	137	95.8	28	2	US-08-930-845-1
21	137	95.8	28	2	US-08-952-568-3
22	137	95.8	28	2	US-08-952-568-4
23	137	95.8	28	2	US-08-952-568-5
24	137	95.8	28	2	US-08-952-568-6
25	137	95.8	28	2	US-08-952-568-10
26	137	95.8	28	2	US-08-952-568-11
27	137	95.8	28	2	US-08-952-568-12

28	137	95.8	28	2	US-08-952-568-13	Sequence 13, Appl
29	137	95.8	28	2	US-09-192-048-21	Sequence 21, Appl
30	137	95.8	28	2	US-08-893-749-2	Sequence 2, Appl
31	137	95.8	28	2	US-08-818-252-37	Sequence 37, Appl
32	137	95.8	28	2	US-09-260-846-16	Sequence 16, Appl
33	137	95.8	28	2	US-08-842-322-31	Sequence 31, Appl
34	137	95.8	28	2	US-09-333-842-1	Sequence 1, Appl
35	137	95.8	28	2	US-09-446-352B-1	Sequence 1, Appl
36	137	95.8	28	2	US-09-316-919-53	Sequence 53, Appl
37	137	95.8	28	2	US-09-630-335-1	Sequence 1, Appl
38	137	95.8	28	2	US-09-629-632A-1	Sequence 1, Appl
39	137	95.8	28	2	US-09-528-200-196	Sequence 196, App
40	137	95.8	28	2	US-09-316-920A-53	Sequence 53, Appl
41	137	95.8	28	2	US-09-646-046-1	Sequence 1, Appl
42	137	95.8	28	2	US-09-285-422-1	Sequence 1, Appl
43	137	95.8	28	2	US-10-100-256B-1	Sequence 1, Appl
44	137	95.8	28	2	US-09-623-548A-454	Sequence 454, App
45	137	95.8	28	2	US-09-623-548A-455	Sequence 455, App

ALIGNMENTS

RESULT 1
US-09-528-200-7
; Sequence 7, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-7

Query Match 100.0%; Score 143; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 1.3e-12;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLKQMAVKYLSILN 28
Db 1 HSDAVFTDNYRRLKQMAVKYLSILN 28

RESULT 2
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; TITLE OF INVENTION: Analogs
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:

ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/690.300B
FILING DATE: 19910424
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/374.503
FILING DATE: 30-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: Pokras, Bruce A.
REGISTRATION NUMBER: 32,748
REFERENCE/DOCKET NUMBER: 8480
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-5801
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 3
US-07-676-987A-1
Sequence 1, Application US/07676987A
Patent No. 5273963
GENERAL INFORMATION:
APPLICANT: TERRY W. MOODY
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
CELL AND NONSMALL CELL LUNG CANCERS
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
STREET: 555 THIRTEENTH ST. N.W.
CITY: WASHINGTON
STATE: D.C.
COUNTRY: U.S.
ZIP: 20004
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/676.987A
FILING DATE: 19910329
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: REPPER, GEORGE R.

REGISTRATION NUMBER: 31,414
REFERENCE/DOCKET NUMBER: 1783-101
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 783-6040
TELEFAX: (202) 783-6031
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-676-987A-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 4
US-07-868-906-1
Sequence 1, Application US/07868906
Patent No. 5376637
GENERAL INFORMATION:
APPLICANT: Sawai, Kiichi
APPLICANT: Kuroono, Masayasu
APPLICANT: Mitani, Takahiko
APPLICANT: Sato, Makoto
APPLICANT: Takahashi, Haruo
APPLICANT: Ohwaki, Hiroyuki
TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D.C.
COUNTRY: USA
ZIP: 20006
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/868.906
FILING DATE: 19920416
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 3-90671
FILING DATE: 22-APR-1991
ATTORNEY/AGENT INFORMATION:
NAME: Oram Jr., George E.
REGISTRATION NUMBER: 27,931
REFERENCE/DOCKET NUMBER: 920238N
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 659-2930
TELEFAX: (202) 897-0357
TELEX: 440142
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-868-906-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
|||||
Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

RESULT 5

US-08-201-092-1
; Sequence 1, Application US/08201092
; Patent No. 5428015
; GENERAL INFORMATION:
; APPLICANT: KURONO, Masayasu
; APPLICANT: MITANI, Takahiko
; APPLICANT: TAKAHASHI, Haruo
; APPLICANT: SAWAI, Kiichi
; TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: ANALOGUES AND USE THEREOF
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &
; ADDRESSEE: Murray
; STREET: 1725 K St. N.W. Suite 1000
; CITY: Washington
; STATE: D. C.
; COUNTRY: U. S. A.
; ZIP: 20006

COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994

CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142

INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
US-08-201-092-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
|||||
Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

RESULT 6

US-07-924-054-11
; Sequence 11, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS &
; ADDRESSEE: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109

COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
; FILING DATE: 19920903

CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-07-924-054-11

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28
|||||
Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

RESULT 7

US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiko
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20036

COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible

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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/243,082
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/853,754
; FILING DATE: 05-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Schnellier, John W.
; REGISTRATION NUMBER: 26,031
; REFERENCE/DOCKET NUMBER: KUWAT 0010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 828-8000
; TELEFAX: (202) 828-8038
; TELEX: SPENCER 64267
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
; US-08-243-082-1
;
Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 8
US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUB, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/361,443
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP Hei. 5-319815
; FILING DATE: 20-DEC-1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
;
Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 9
US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER, ANNIE-CLAUDE;
; APPLICANT: PATRICK; ROCHE-DEGREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSECTION
; TITLE OF INVENTION: OF CELLS
; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288,681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: PEPTIDE
; US-08-288-681A-1
;
Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 10
US-07-776-272-26
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1  RESULT 11
2  US-08-308-729-1
3  ; Sequence 1, Application US/08308729
4  ; Patent No. 5677419
5  ; GENERAL INFORMATION:
6  ; APPLICANT: Bolin, David R.
7  ; TITLE OF INVENTION: Cyclic Vasoactive Peptide
8  ; TITLE OF INVENTION: Analogs
9  ; NUMBER OF SEQUENCES: 73
10 ; CORRESPONDENCE ADDRESS:
11 ; ADDRESSEE: Hoffmann-La Roche Inc.
12 ; STREET: 340 Kingsland Street
13 ; CITY: Nutley
14 ; STATE: New Jersey
15 ; COUNTRY: USA
16 ; ZIP: 07110
17 ; COMPUTER READABLE FORM:
18 ; MEDIUM TYPE: Floppy disk
19 ; COMPUTER: IBM PC compatible
20 ; OPERATING SYSTEM: PC-DOS/MS-DOS
21 ; SOFTWARE: Patent In Release #1.0, Version #1.25
22 ; CURRENT APPLICATION DATA:
23 ; APPLICATION NUMBER: US/08/308.729

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RESULT 12
US-08-062-472B-40
; Sequence 40, Application US/08062472B
; Patent No. 569594
; GENERAL INFORMATION:
; APPLICANT: Sherwood, Nancy G M
; APPLICANT: Parker, David B
; APPLICANT: McRory, John E
; APPLICANT: Lescheid, David W
; TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
; NUMBER OF SEQUENCES: 49
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
; ADDRESSEE: WHINSTON, LLP
; STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
; STREET: SALMON STREET
; CITY: PORTLAND
; STATE: OREGON
; COUNTRY: USA
; ZIP: 97204-2988
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/062.472B
; FILING DATE: 14-MAY-1993
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: POLLEY, RICHARD J
; REGISTRATION NUMBER: 28107
; TELECOMMUNICATION INFORMATION:

TELEPHONE: (503) 226-7391
TELEFAX: (503) 228-9446
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-062-472B-40

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 13

US-08-171-701A-1
Sequence 1, Application US/08171701A
Patent No. 5721211
GENERAL INFORMATION:

APPLICANT:
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR
TREATING SMALL CELL AND NONSMALL
CELL LUNG CANCERS
NUMBER OF SEQUENCES: 3
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect, Version 5.1 Plus
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/171,701A

FILING DATE: December 22, 1993

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 28 Amino Acids

TYPE: Amino Acid

TOPOLOGY: Linear

MOLECULE TYPE: Peptide

FRAGMENT TYPE: N-terminal

FEATURE:

NAME/KEY: Modified-site

LOCATION: 1

OTHER INFORMATION:

FEATURE:

NAME/KEY: Modified-site

LOCATION: 28

OTHER INFORMATION:

US-08-171-701A-1

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 14

US-08-741-678-1

Sequence 1, Application US/08741678

Patent No. 5733762

GENERAL INFORMATION:

APPLICANT: MIDOUX, PATRICK; ERBACHER,

APPLICANT: PATRICK; ROCHE-DEGREMONT,

APPLICANT: ANNIE-CLAUDE; MONSIGNY, MICHEL

TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC

TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
PREPARATION AND THEIR USE FOR THE
TRANSFECTION OF CELLS
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:

ADDRESSEE: BIERMAN & MUSERLIAN

STREET: 600 THIRD AVENUE

CITY: NEW YORK

STATE: NEW YORK

COUNTRY: USA

ZIP: 10016

COMPUTER READABLE FORM:

MEDIUM TYPE: FLOPPY DISK

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/741,678

FILING DATE: 31-OCT-1996

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: MUSERLIAN, CHARLES A

REGISTRATION NUMBER: 19,683

REFERENCE/DOCKET NUMBER: 410.005-1-1

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 661-8000

TELEFAX: (212) 661-8002

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 28

TYPE: Amino Acid

STRANDEDNESS: Unknown

TOPOLOGY: Unknown

MOLECULE TYPE: PEPTIDE

US-08-741-678-1

Query Match 95.8%; Score 137; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 8.6e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

|||||

Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

RESULT 15

US-08-519-180-2

Sequence 2, Application US/08519180

Patent No. 5770570

GENERAL INFORMATION:

APPLICANT: PAUL, SUDHIR

APPLICANT: YASUKO, NODA

APPLICANT: ISRAEL, RUBINSTEIN

TITLE OF INVENTION: A METHOD OF DELIVERING A VASOACTIVE

TITLE OF INVENTION: INTESTINAL POLYPEPTIDE, AN ENCAPSULATED VASOACTIVE

TITLE OF INVENTION: INTESTINAL POLYPEPTIDE, AND A METHOD OF MAKING THE

TITLE OF INVENTION: ENCAPSULATED VASOACTIVE INTESTINAL POLYPEPTIDE

NUMBER OF SEQUENCES: 13

CORRESPONDENCE ADDRESS:

ADDRESSEE: CUSHMAN, DARBY & CUSHMAN

STREET: 1100 NEW YORK AVENUE, N.W.

CITY: WASHINGTON

STATE: D.C.

COUNTRY: USA

ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/519,180

FILING DATE: 25-AUG-1995


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; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/224488
; FILING DATE: 07-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: SEMINAUER, JEFFREY A.
; REGISTRATION NUMBER: 31,933
; REFERENCE/DOCKET NUMBER: 4464/98971
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-861-3000
; TELEFAX: 202-822-0944
; TELEX: 6714627 CUSH
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; US-08-519-180-2

Query Match          95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred No. 8.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
      ||||||| ||||||| |||||||
Db      1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:23:44
Job time : 21.875 secs
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; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 115
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-115

Query Match          97.9%; Score 140; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 3
US-09-929-818-117
; Sequence 117 Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 117
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-117

Query Match          97.2%; Score 139; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.4e-12;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 4
US-09-929-818-116
; Sequence 116 Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 116
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic VIP
; OTHER INFORMATION: analog
US-09-929-818-116

Query Match          96.5%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 5
US-09-929-818-1
; Sequence 1, Application US/09929818
; Patent No. US20020099003A1
; GENERAL INFORMATION:
; APPLICANT: WILSON, LELAND F.
; TITLE OF INVENTION: TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
; TITLE OF INVENTION: AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
; TITLE OF INVENTION: AND AGONISTS THEREOF
; FILE REFERENCE: 9050-0013.24
; CURRENT APPLICATION NUMBER: US/09/929,818
; CURRENT FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/498,522
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: 09/181,316
; PRIOR FILING DATE: 1998-10-27
; PRIOR APPLICATION NUMBER: 08/959,064
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 08/959,057
; PRIOR FILING DATE: 1997-10-28
; NUMBER OF SEQ ID NOS: 207
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-929-818-1

Query Match          95.8%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 6

US-09-999-745-53
; Sequence 53, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Baird, Geoffrey
; TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
; FILE REFERENCE: REGEN1470-1
; CURRENT APPLICATION NUMBER: US/09/999,745
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-05-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

Query Match 95.8%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 7

US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; CURRENT FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match 95.8%; Score 137; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 8

US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:

; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock with
; FILE REFERENCE: VPAC1R, VPAC2R, and PAC1R Agonists
; CURRENT APPLICATION NUMBER: US/10/090,109A
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 9

US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DICICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLRKQMAVKKYLNSILN 28

RESULT 10

US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10

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; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-004-530A-17
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
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RESULT 11

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US-10-114-716A-3
; Sequence 3, Application US/10114716A
; Publication No. US20030078203A1
; GENERAL INFORMATION:
; APPLICANT: Sudhir Paul
; APPLICANT: Yasuhiro Nishiyama
; TITLE OF INVENTION: Covalently Reactive Transition State
; FILE REFERENCE: UTH001HB
; CURRENT APPLICATION NUMBER: US/10/114,716A
; PRIOR FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: 09/862,849
; PRIOR FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/046,373
; PRIOR FILING DATE: 1998-03-23
; PRIOR APPLICATION NUMBER: 60/280,624
; PRIOR FILING DATE: 2001-03-31
; NUMBER OF SEQ ID NOS: 57
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 3
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Vasoactive intestinal peptide
US-10-114-716A-3
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
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RESULT 12

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US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
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; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Prasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; PRIOR FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-211-994-1
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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```
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
```

RESULT 13

```
US-10-197-954-145
; Sequence 145, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K"ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; PRIOR FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 145
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-145
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Query Match          95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMAVKKYLNSILN 28
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RESULT 14

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US-10-100-256B-1
; Sequence 1, Application US/10100256B
; Publication No. US20030152511A1
; GENERAL INFORMATION:
; APPLICANT: Thakur, Madhukar
```

; TITLE OF INVENTION: RADIOLABELED VASOACTIVE INTESTINAL
; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
; FILE REFERENCE: 8321-104-D11
; CURRENT APPLICATION NUMBER: US/10/100,256B
; PRIOR FILING DATE: 2002-03-15
; PRIOR APPLICATION NUMBER: US 09/333,842
; PRIOR FILING DATE: 1999-06-15
; PRIOR APPLICATION NUMBER: US 60/089,364
; PRIOR FILING DATE: 1998-06-15
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-100-256B-1

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
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Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 15
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match 95.8%; Score 137; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.8e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 segs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA New:*

- 1: /cgn2_6/ptodata/2/pubaa/US08_NEW_PUB.pep.*
- 2: /cgn2_6/ptodata/2/pubaa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubaa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/2/pubaa/PCT_NEW_PUB.pep.*
- 5: /cgn2_6/ptodata/2/pubaa/US05_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/2/pubaa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/ptodata/2/pubaa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/2/pubaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	95.8	28	7	US-11-175-690-352
2	137	95.8	28	7	US-11-175-690-353
3	137	95.8	637	7	US-11-175-690-265
4	137	95.8	637	7	US-11-175-690-266
5	105	73.4	636	7	US-11-175-690-240
6	104	72.7	27	7	US-11-175-690-326
7	104	72.7	27	7	US-11-175-690-327
8	104	72.7	38	7	US-11-175-690-328
9	104	72.7	38	7	US-11-175-690-329
10	104	72.7	636	7	US-11-175-690-239
11	104	72.7	647	7	US-11-175-690-241
12	104	72.7	647	7	US-11-175-690-242
13	73	51.0	636	7	US-11-175-690-278
14	72	50.3	27	7	US-11-175-690-364
15	72	50.3	27	7	US-11-175-690-365
16	72	50.3	636	7	US-11-175-690-277
17	66	46.2	30	7	US-11-112-277-2
18	65	45.5	30	7	US-11-112-277-29
19	65	45.5	49	6	US-10-997-081A-26
20	65	45.5	49	6	US-10-997-081A-27
21	65	45.5	49	6	US-10-997-081A-28
22	65	45.5	49	6	US-10-997-081A-29
23	65	45.5	49	6	US-10-997-081A-30
24	65	45.5	49	6	US-10-997-081A-31
25	65	45.5	49	6	US-10-997-081A-32

26	65	45.5	49	6	US-10-997-081A-35
27	65	45.5	95	6	US-10-997-081A-25
28	65	45.5	97	6	US-10-997-081A-11
29	65	45.5	97	6	US-10-997-081A-18
30	65	45.5	97	6	US-10-997-081A-19
31	65	45.5	97	6	US-10-997-081A-20
32	65	45.5	97	6	US-10-997-081A-21
33	65	45.5	97	6	US-10-997-081A-22
34	65	45.5	97	6	US-10-997-081A-23
35	65	45.5	97	6	US-10-997-081A-40
36	65	45.5	97	6	US-10-997-081A-41
37	65	45.5	105	6	US-10-997-081A-10
38	64	44.8	30	7	US-11-112-277-31
39	63	44.1	30	7	US-11-112-277-30
40	49	34.3	636	7	US-11-175-690-268
41	48	33.6	27	7	US-11-175-690-354
42	48	33.6	27	7	US-11-175-690-355
43	48	33.6	636	7	US-11-175-690-267
44	44.5	31.1	159	6	US-10-487-657-5114
45	44.5	31.1	162	6	US-10-821-234-1621

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; PRIOR FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.8%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

Db 1 HSDAVFTDNYRLRKQMAVKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06
PRIOR APPLICATION NUMBER: US 60/505,172
PRIOR FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: US 60/506,746
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 353
LENGTH: 28
TYPE: PRT
ORGANISM: Homo sapiens
US-11-175-690-353

Query Match 95.8%; Score 137; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 3.5e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3
US-11-175-690-265
Sequence 265, Application US/11175690
Publication No. US20060014254A1
GENERAL INFORMATION:
APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06
PRIOR APPLICATION NUMBER: US 60/505,172
PRIOR FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: US 60/506,746
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 265
LENGTH: 637
TYPE: PRT
ORGANISM: Homo sapiens
US-11-175-690-265

Query Match 95.8%; Score 137; DB 7; Length 637;

Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 610 HSDAVFTDNYTLRKQMAVKKYLNSILN 637

RESULT 4
US-11-175-690-266
Sequence 266, Application US/11175690
Publication No. US20060014254A1
GENERAL INFORMATION:
APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06
PRIOR APPLICATION NUMBER: US 60/505,172
PRIOR FILING DATE: 2003-09-24
PRIOR APPLICATION NUMBER: US 60/506,746
PRIOR FILING DATE: 2003-09-30
NUMBER OF SEQ ID NOS: 568
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 266
LENGTH: 637
TYPE: PRT
ORGANISM: Homo sapiens
US-11-175-690-266

Query Match 95.8%; Score 137; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 1.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 25 HSDAVFTDNYTLRKQMAVKKYLNSILN 52

RESULT 5
US-11-175-690-240
Sequence 240, Application US/11175690
Publication No. US20060014254A1
GENERAL INFORMATION:
APPLICANT: Haseltine et al.
TITLE OF INVENTION: Albumin Fusion Proteins
FILE REFERENCE: PF605
CURRENT APPLICATION NUMBER: US/11/175,690
CURRENT FILING DATE: 2005-07-07
PRIOR APPLICATION NUMBER: PCT/US04/001369
PRIOR FILING DATE: 2004-01-20
PRIOR APPLICATION NUMBER: US 60/441,305
PRIOR FILING DATE: 2003-01-22
PRIOR APPLICATION NUMBER: US 60/453,201
PRIOR FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US 60/467,222
PRIOR FILING DATE: 2003-05-02
PRIOR APPLICATION NUMBER: US 60/472,816
PRIOR FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: US 60/476,267
PRIOR FILING DATE: 2003-06-06

; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 240
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match 73.4%; Score 105; DB 7; Length 636;
Best Local Similarity 67.9%; Pred. No. 5.6e-08;
Matches 19; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 28
|||:||||:|||||||:|:
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 52

RESULT 6
US-11-175-690-326
; Sequence 326, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 326
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-326

Query Match 72.7%; Score 104; DB 7; Length 27;
Best Local Similarity 70.4%; Pred. No. 2.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 27
|||:||||:|||||||:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 7
US-11-175-690-327
; Sequence 327, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690

; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match 72.7%; Score 104; DB 7; Length 27;
Best Local Similarity 70.4%; Pred. No. 2.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 27
|||:||||:|||||||:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 8
US-11-175-690-328
; Sequence 328, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match 72.7%; Score 104; DB 7; Length 38;
Best Local Similarity 70.4%; Pred. No. 3.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRRLRKQMAVKKYLNSIL 27

Wed Feb 8 17:49:10 2006

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Db 1 HSDGIFTDSYRKRQMAVKKYLAVL 27
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; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

Query Match 72.7%; Score 104; DB 7; Length 636;
Best Local Similarity 70.4%; Pred. No. 7.8e-08;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLSIL 27
      |||:||||:| |||:|||||:|:|
Db 610 HSDGIFTDSYRKRQMAVKKYLAVL 636

RESULT 11
US-11-175-690-241
; Sequence 241, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

Query Match 72.7%; Score 104; DB 7; Length 647;
Best Local Similarity 70.4%; Pred. No. 8e-08;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLSIL 27
      |||:||||:| |||:|||||:|:|
Db 610 HSDGIFTDSYRKRQMAVKKYLAVL 636

RESULT 12
US-11-175-690-242
; Sequence 242, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
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Db 1 HSDGIFTDSYRKRQMAVKKYLAVL 27
      |||:||||:| |||:|||||:|:|
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

Query Match 72.7%; Score 104; DB 7; Length 38;
Best Local Similarity 70.4%; Pred. No. 3.2e-09;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLSIL 27
      |||:||||:| |||:|||||:|:|
Db 1 HSDGIFTDSYRKRQMAVKKYLAVL 27

RESULT 10
US-11-175-690-239
; Sequence 239, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
```

```
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 242
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-242
```

```
Query Match 72.7%; Score 104; DB 7; Length 647;
Best Local Similarity 70.4%; Pred. No. 8e-08;
Matches 19; Conservative 4; Mismatches 4; Indels 0; Gaps 0;
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```
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSIL 27
|||:||||:|||||||:|
Db 25 HSDGIFTDSYRQKMAVKKYLAAVL 51
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```
RESULT 13
US-11-175-690-278
; Sequence 278, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 278
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-278
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Query Match 51.0%; Score 73; DB 7; Length 636;
Best Local Similarity 42.9%; Pred. No. 0.0026;
Matches 12; Conservative 9; Mismatches 7; Indels 0; Gaps 0;
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Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSIL 28
||:||||:|:|:|||||:|
Db 25 HADGVFTSDFSKLLGQLSAKKYLESLMD 52
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```
RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364
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```
Query Match 50.3%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.0001;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;
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```
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSIL 27
||:||||:|:|:|||||:|
Db 1 HADGVFTSDFSKLLGQLSAKKYLESLM 27
```

```
RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27
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```
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

Query Match      50.3%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 0.0001;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

QY      1 HSDAVFTDNYRRLRKKQMAVKKYLNSIL 27
  | | | | | : | : | : | : | : | : | :
Db      1 HADGVFTSDFSKLLGQLSAAKKYLESLM 27

Search completed: January 25, 2006, 15:31:43
Job time : 3.5 secs
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Result No.	Score	Query			DB	ID	Description
		Match	Length	†			
1	137	95.8	28	2	B60071	vasoactive intesti	
2	137	95.8	28	2	A60304	vasoactive intesti	
3	137	95.8	55	1	VRBO	vasoactive intesti	
4	137	95.8	55	1	VRBH	vasoactive intesti	
5	137	95.8	55	1	VRRE	vasoactive intesti	
6	137	95.8	58	1	VRPG	vasoactive intesti	
7	137	95.8	145	2	A60038	vasoactive intesti	
8	137	95.8	170	1	VRHU	vasoactive intesti	
9	137	95.8	170	1	VRRT	vasoactive intesti	
10	137	95.8	170	2	A60037	vasoactive intesti	
11	126	88.1	165	1	VRCH	vasoactive intesti	
12	125	87.4	28	2	A60303	vasoactive intesti	
13	124	86.7	55	1	VRGP	vasoactive intesti	
14	115	80.4	25	2	QJ0361	vasoactive intesti	
15	114	79.7	28	2	A38232	vasoactive intesti	
16	104	72.7	27	2	A61071	pituitary adenylat	
17	104	72.7	38	2	A49165	pituitary adenylat	
18	104	72.7	173	2	S34767	neuropeptides prec	
19	104	72.7	175	2	A37786	pituitary adenylat	
20	104	72.7	176	2	I84638	pituitary adenylat	
21	104	72.7	176	2	A34044	pituitary adenylat	
22	104	72.7	195	2	I50456	pituitary adenylat	
23	98	68.5	38	2	A61070	pituitary adenylat	
24	80	55.9	35	1	HWGHD	exendin-2 - Gila m	
25	77	53.8	38	1	HWGHS	exendin-1 - Mexica	
26	77	53.8	104	2	A32731	somatoliberin prec	
27	76	53.1	103	2	A41410	somatoliberin prec	
28	70	49.0	44	1	RHBOS	somatoliberin - bo	
29	65	45.5	44	1	RHPG	somatoliberin - pi	

Biochem. Biophys. Res. Commun. 185, 134-141, 1992
A>Title: Isolation and characterization of peptides which act on rat platelets, from a P
A:Reference number: JH0618; MUID:92287083; PMID:1318039
A:Accession: JH0618
A:Molecule type: protein
A:Residues: 125-152 <KIT>
A:Cross-references: UNIPARC:UPI000002D1C0
A:Experimental source: pheochromocytoma
R.Yanagami, T.; Ohsawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto
Ann. N. Y. Acad. Sci. 527, 87-102, 1988
A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene
A:Reference number: I51955; MUID:88267775; PMID:2839091
A:Accession: I51955
A>Status: translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-170 <RES>
A:Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:g340253; PIDN:AAA69515.1; PID:
R.Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 47, 1136-1141, 1987
A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a
A:Reference number: I56494
A:Accession: I56494
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 78-155 <RE2>
A:Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:g340250; PIDN:AAA61285.1; PID:
R.Bloom, S.R.; Christofides, N.D.; Delamatter, J.; Buell, G.; Kawashima, E.; Polak, J.M.
Lancet 2, 1163-1165, 1983
A>Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep
A:Reference number: I56988; MUID:184066682; PMID:6139527
A:Accession: I56988
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 50-170 <RE3>
A:Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:g340247; PIDN:AAA63268.1; PID:
C:Genetics:
A:Gene: GDB:VIP
A:Cross-references: GDB:120490; OMIM:192320
A:Map position: 6q26-6q27
A:Introns: 36/2; 77/2; 112/2; 156/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurog
F:1-20/Domain: signal sequence #status predicted <SIG>
F:81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>
F:81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>
F:125-152/Product: vasoactive intestinal peptide #status experimental <VIP>
F:68,133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152

RESULT 9
VRRT
N:Contains: intestinal peptide precursor - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 28-Feb-1986 #sequence revision 30-Jun-1993 #text change 09-Jul-2004
C:Accession: A60037; B60037; A01548; A28102; A60586; A60587; S09691
R:Giladi, E.; Shani, Y.; Gozes, I.
Brain Res. Mol. Brain Res. 7, 261-267, 1990
A>Title: The complete structure of the rat VIP gene.
A:Reference number: A60053; MUID:90244869; PMID:21559586
A:Accession: A60053
A:Molecule type: DNA
A:Residues: 1-170 <GIL>

A:Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A
A>Note: the authors translated the codon GAG for residue 67 as Gln
R:Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A:Reference number: A60037; MUID:91232388; PMID:1851524
A:Accession: B60037
A>Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 78-155 <IAM>
A:Cross-references: UNIPARC:UPI0000173511
R:Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.
FEBS Lett. 183, 55-59, 1985
A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA
A:Reference number: A01548; MUID:85154612; PMID:3838518
A:Accession: A01548
A:Molecule type: mRNA
A:Residues: 9-170 <NIS>
A:Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:g57481; PIDN:CAA26200.1; PID:9
A:Experimental source: cerebral cortex
F:Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.
J. Biol. Chem. 263, 9083-9086, 1988
A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu
A:Reference number: A28102; MUID:88243784; PMID:3379062
A:Accession: A28102
A:Molecule type: protein
A:Residues: 134-152 <GOE>
A:Cross-references: UNIPARC:UPI00000351E4
A>Note: the source of this novel short form of VIP was rat basophilic leukemia cells
R:Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Robberecht, P.; Chris
Endocrinology 125, 1296-1302, 1989
A>Title: Peptide histidine isoleucineamide (PHI)-(1-27)-Gly as a new major form of PHI in
A:Reference number: A60586; MUID:89339237; PMID:2759027
A:Accession: A60586
A:Molecule type: protein
A:Residues: 81-108 <CAU>
A:Cross-references: UNIPARC:UPI0000173512
R:Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.
Endocrinology 125, 2645-2655, 1989
A>Title: Variable distribution of three molecular forms of peptide histidine isoleucineam
A:Reference number: A60587; MUID:90005222; PMID:2792003
A:Accession: A60587
A:Molecule type: protein
A:Residues: 81-122 <CA2>
A:Cross-references: UNIPARC:UPI0000173513
R:Buscali, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A:Reference number: S09688; MUID:90254163; PMID:2340294
A:Contents: annotation; comparison of mammalian PHI sequences
C:Comment: Two active peptides are released from the VIP precursor by cleavage at paire
C:Genetics:
A:Introns: 36/2; 77/2; 156/2
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F:1-21/Domain: signal sequence #status predicted <SIG>
F:81-122/Product: PHI-42 #status experimental <PH42>
F:81-108/Product: PHI-27-Gly #status experimental <PHIG>
F:81-107/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>
F:125-152/Product: vasoactive intestinal peptide #status predicted <VIP>
F:107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl
F:133/Binding site: carboxylate (Asn) (covalent) #status predicted
F:152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152

Db

RESULT 10

A60037
vasoactive intestinal peptide precursor - mouse
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Mus musculus (house mouse)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60037; 149386
R;Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.
Brain Res. Mol. Brain Res. 9, 217-231, 1991
A;Title: Characterization of the gene and messages for vasoactive intestinal polypeptide
A;Reference number: A60037; MUID:91232388; PMID:1851524
A;Status: not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 1-170 <LAM>
A;Cross-references: UNIPROT:P32648; UNIPARC:UPI000002171F
R;Sena, M.; Bravo, D.T.; Von Agoston, D.; Waschek, J.A.
DNA Seq. 5, 25-29, 1994
A;Title: High conservation of upstream regulatory sequences on the human and mouse vasoa
A;Reference number: 149386; MUID:95201289; PMID:7894056
A;Accession: 149386
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-35 <RES>
A;Cross-references: UNIPARC:UPI000016D189; EMBL:X74297; NID:G895871; PIDN:CAAS2350.1; PI
C;Comment: Two active peptides are released from the VIP precursor by cleavage at paired
C;Genetics:
A;Gene: VIP
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;81-107/Product: PHI-27 #status predicted <PHI>
F;125-152/Product: vasoactive intestinal peptide
F;107/Modified site: amidated carboxyl end (ile) (amide in mature form from following gl
F;133/Binding site: carbohydrate (asn) (covalent) #status predicted
F;152/Modified site: amidated carboxyl end (asn) (amide in mature form from following gl

Query Match 95.8%; Score 137; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 3.2e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRQMAVKKYLNSILN 28

DB 125 HSDAVFTDNYRLRQMAVKKYLNSILN 152

RESULT 11

VRCH
vasoactive intestinal peptide precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 24-Apr-1984 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S47470; A91425; A90720; A01551
R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.
submitted to the EMBL Data Library, August 1994
A;Description: Evidence for alternative splicing of the chicken VIP gene.
A;Reference number: S47470
A;Accession: S47470
A;Molecule type: mRNA
A;Residues: 1-165 <TAL>
A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PID
R;Nilsson, A.
FEBS Lett. 60, 322-326, 1975
A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.
A;Reference number: A91425; MUID:76210823; PMID:1227973
A;Accession: A91425
A;Molecule type: protein
A;Residues: 94-121 <NIL>
A;Cross-references: UNIPARC:UPI00000351E1
R;Bodanszky, M.; Lin, C.Y.; Viotakis, A.E.; Mutt, V.; Said, S.I.
Bioorg. Chem. 5, 339-350, 1976
A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of p
A;Reference number: A90720
A;Contents: synthesis

A;Accession: A90720

A;Molecule type: protein
A;Residues: 107-121 <BOD>
A;Cross-references: UNIPARC:UPI00000173517
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; neuropeptide
F;1-25/Domain: signal sequence #status predicted <SIG>
F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>
F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 88.1%; Score 126; DB 1; Length 165;
Best Local Similarity 88.9%; Pred. No. 1.2e-10;
Matches 24; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRQMAVKKYLNSIL 27

DB 94 HSDAVFTDNYSRFRQMAVKKYLNSVL 120

RESULT 12

A60303
vasoactive intestinal peptide - smaller spotted catshark
C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)
C;Date: 10-Nov-1992 #sequence_revision 10-Nov-1992 #text_change 09-Jul-2004
C;Accession: A60303; A60314; S07432
R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.
Regul. Pept. 18, 356, 1987
A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.
A;Reference number: A60303
A;Accession: A60303
A;Molecule type: protein
A;Residues: 1-28 <DIM>
A;Cross-references: UNIPROT:P09685; UNIPARC:UPI000013884B
A;Note: this reference is an abstract
R;Dimoline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A;Title: Isolation and partial sequence of elasmobranch VIP.
A;Reference number: A60314; MUID:86234323; PMID:3715063
A;Accession: A60314
A;Molecule type: protein
A;Residues: 1-10 <DI2>
A;Cross-references: UNIPARC:UPI000017662D
R;Dimoline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A;Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from

Query Match 87.4%; Score 125; DB 2; Length 28;
Best Local Similarity 85.2%; Pred. No. 2.8e-11;
Matches 23; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRQMAVKKYLNSIL 27

DB 1 HSDAVFTDNYSRIRQMAVKKYLNSLL 27

RESULT 13

VRGP
vasoactive intestinal peptide precursor - guinea pig (fragments)
N;Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
C;Species: Cavia porcellus (guinea pig)
C;Date: 31-Mar-1988 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
C;Accession: A26175; S09688; A57082; B60304
R;Du, B.H.; Eng, J.; Hulmes, J.D.; Chang, M.; Pan, Y.C.E.; Yalow, R.S.
Biochem. Biophys. Res. Commun. 128, 1093-1098, 1985

```
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P39089; UNIPARC:UPI00001138846
A>Note: sequence extracted from NCBI backbone (NCBIP:87215)
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

      Query Match          79.7%   Score 114;   DB 2;   Length 28;
      Best Local Similarity 78.6%;   Pred. NO. 1e-09;
      Matches 22;   Conservative 4;   Mismatches 2;   Indels 0;   Gaps 0;
```

Qy 1 HSDAVFTDNYVRLRKQMAVKKYLNSILN 28
| | | | | | | | | | | | | | | | | |

Dd 1 HSDAVFTDSYTRLTKQMAVRKYLDLSILN 28
| | | | | | | | | | | | | | | | | |

Search completed: January 25, 2006, 15:20:38
Job time : 14.25 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2006 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-7

Perfect score: 143

Sequence: 1 HSDAVFTDNYRLRQKQMAVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : UniProt_05.80.*

1: uniprot_sprot.*

2: uniprot_trenbl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	137	95.8	28	1 VIP_CANFA	P63289 canis faml
2	137	95.8	28	1 VIP_CAPHI	P63290 capra hircu
3	137	95.8	28	1 VIP_MACMU	P64488 macaca mula
4	137	95.8	28	1 VIP_SHEEP	P63291 ovis aries
5	137	95.8	72	1 VIP_PIG	P01284 sus scrofa
6	137	95.8	72	1 VIP_RABIT	P32649 oryctolagus
7	137	95.8	118	2 Q5TCY7 HUMAN	Q5tcy7 homo sapien
8	137	95.8	145	2 Q7M2Y9 MACFA	Q7m2y9 macaca fasc
9	137	95.8	153	2 Q7TSR4 9MURI	Q7tsr4 arvicanthis
10	137	95.8	169	2 Q5TCY8 HUMAN	Q5tcy8 homo sapien
11	137	95.8	170	1 VIP_BOVIN	P81401 bos taurus
12	137	95.8	170	1 VIP_HUMAN	P01282 homo sapien
13	137	95.8	170	1 VIP_MOUSE	P32648 mus musculus
14	137	95.8	170	1 VIP_RAT	P01283 rattus norv
15	137	95.8	170	2 Q5TCY9 HUMAN	Q5tcy9 homo sapien
16	137	95.8	171	2 Q9D2Z7 MOUSE	Q9d2z7 mus musculus
17	126	88.1	28	1 VIP_ALIMI	P48142 alligator m
18	126	88.1	28	1 VIP_RANRI	P81016 rana ridibu
19	126	88.1	70	2 Q4TX3 ANAPL	Q4tx3 anas platyr
20	126	88.1	86	2 Q4TZY9 9AVES	Q4tzy9 anser anser
21	126	88.1	200	1 VIP_CHICK	P48143 gallus gall
22	126	88.1	200	1 VIP_MELGA	P45644 meleagris g
23	126	88.1	202	2 Q7ZYGB XENLA	Q7zygb xenopus lae
24	125	87.4	28	1 VIP_SCYCA	P09685 scyllorhina
25	125	87.4	28	2 Q9PR19 AMICA	Q9pr19 amia calva
26	125	87.4	147	2 Q4SQN2 TETNG	Q4sqn2 tetraodon n
27	124	86.7	72	1 VIP_CAVPO	P04566 cavia porce
28	121	84.6	28	2 Q9P8N8 CARAU	Q9p8n8 carassius a
29	115	80.4	25	1 VIP_GADMO	P05684 gadus morhua
30	114	79.7	28	1 VIP_DIDMA	P39089 didelphis m
31	108	75.5	38	2 Q75W85_MISAN	Q75w85 misgurnus a

32	105	73.4	172	2	Q9DE29 BRARE	Q9de29 brachydanio
33	105	73.4	199	2	Q5XJ29 BRARE	Q5xj29 brachydanio
34	104	72.7	38	2	Q75W94 HALRO	Q75w94 halocynthia
35	104	72.7	38	2	Q8IU36 PERAM	Q8iu36 periplaneta
36	104	72.7	38	2	Q8IU37 SEPLE	Q8iu37 sepioteuthi
37	104	72.7	38	2	Q8IU38 HYDMA	Q8iu38 hydra magni
38	104	72.7	38	2	Q8IU39 DUGJA	Q8iu39 dugesia jap
39	104	72.7	38	2	Q75W87 ONCMY	Q75w87 oncorhynch
40	104	72.7	38	2	Q75W90 9TELE	Q75w90 sardinops m
41	104	72.7	38	2	Q75W92 9PERC	Q75w92 stephanolep
42	104	72.7	38	2	Q8AYP4 ACISC	Q8ayp4 acipenser s
43	104	72.7	38	2	Q8AYP5 TRAJP	Q8ayp5 trachurus j
44	104	72.7	62	2	Q53B12 9PRIM	Q53b12 gorilla gor
45	104	72.7	62	2	Q53B13_PONPY	Q53b13 pongo pygma

ALIGNMENTS

RESULT 1
VIP_CANFA
ID VIP_CANFA STANDARD; PRT; 28 AA.
AC P63289; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
CN Name=VIP;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;
OC Canis.
OX NCBI_TaxID=9615;
RN [1]
RP PROTEIN SEQUENCE.
RX MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;
RA Eng J., Du B.-H., Raufman J.-E., Yalow R.S.;
RT "Purification and amino acid sequences of dog, goat and guinea pig
RT VIPs".
RL Peptides 7 Suppl. 1:17-20(1986).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC PIR; A60304; A60304.
DR HSHP; P18509; 1GEA.
DR Ensembl; ENSCAFG0000000538; Canis familiaris.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone.2; 1.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 1.
DR PROSITE; PS00260; GLUCAGON; 1.
KW Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT MOD RES 28
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF63F CRC64;

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRQKQMAVKYLSILN 28
Db 1 HSDAVFTDNYRLRQKQMAVKYLSILN 28

```

RT "Rhesus monkey gastroenteropancreatic hormones: relationship to human
RL sequences.";
CC Regul. Pept. 32:39-45(1991).
CC -|- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -|- SUBCELLULAR LOCATION: Secreted.
CC -|- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC -----
CC PIR; B60071; B60071.
CC InterPro; IPR000532; Glucagon.
CC Pfam; PF00123; Hormone_2; 1.
CC PRINTS; PR00275; GLUCAGON.
CC SMART; SM00070; GLUC; 1.
CC PROSITE; PS00260; GLUCAGON; 1.
CC AMIDATION; Direct protein sequencing; Glucagon family; Hormone.
FT MOD_RES 28 Asparagine amide.
SQ SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 95.8%; Score 137; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 7.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
DB 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28

RESULT 4
VIP_SHEEP
ID VIP_SHEEP STANDARD; PRT; 28 AA.
AC P63291; P04565;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide).
DE Name=VIP;
OS Ovis aries (Sheep).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Brain;
RX MEDLINE=91045331; PubMed=2235680; DOI=10.1016/0196-9781(90)90184-7;
RT "Isolation and primary structure of VIP from sheep brain.";
RL Peptides 11:703-706(1990).
RN [2]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA Boujnou Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA Christophe J.;
RT "Purification and amino acid sequence of vasoactive intestinal
RT peptide, peptide histidine isoleucineamide and secretin from the ovine
RT small intestine.";
RL Regul. Pept. 32:169-179(1991).
RN [3]
RP PROTEIN SEQUENCE.
RC TISSUE=Hypothalamus, and Intestine;
RX PubMed=1574609; DOI=10.1016/0167-0115(92)90053-W;
RA Miyata A., Jiang L., Stibbs H.H., Arimura A.;
RT "Chemical characterization of vasoactive intestinal polypeptide-like
RT immunoreactivity in ovine hypothalamus and intestine.";

```


RT "Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.";

RL Peptides 11:123-128(1990).

CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

CC -!- FUNCTION: PHI also causes vasodilation.

CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.

CC -!- SIMILARITY: Belongs to the glucagon family.

CC -----

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CC -----

CC HSSP; P18509; IGEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone_2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

KW Amidation; Cleavage on pair of basic residues; Glucagon family; Hormone.

KW Direct protein sequencing; Glucagon family; Hormone.

FT PEPTIDE 1 27 Intestinal peptide PHI-27.

FT PEPTIDE 45 72 Vasoactive intestinal peptide.

FT MOD_RES 27 27 Isoleucine amide.

FT MOD_RES 72 72 Asparagine amide.

FT NON_TER 1 1

FT NON_TER 72 72

FT SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

SQ

Query Match 95.8%; Score 137; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 2.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 45 HSDAVFTDNYRLRKQMAVKKYLNSILN 72
|||||

RESULT 7

Q5TCV7_HUMAN PRELIMINARY; PRT; 118 AA.

AC Q5TCV7;

DT 01-FEB-2005 (TrEMBLrel. 29, Created)

DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)

DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)

DE Vasoactive intestinal peptide (Fragment).

GN Names=VIP; ORFNames=RP4-546K19.1-003;

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo

OX NCBI_TaxID=9606;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Johnson C.;

RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.

DR ENBL; AL133356; CA121766.1; -; Genomic DNA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone_2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR SMART; SM00070; GLUCA; 2.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

FT SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

SQ

Query Match 95.8%; Score 137; DB 2; Length 118;
Best Local Similarity 96.4%; Pred. No. 3.5e-12;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 45 HSDAVFTDNYRLRKQMAVKKYLNSILN 72
|||||

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 74 HSDAVFTDNYRLRKQMAVKKYLNSILN 101
|||||

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

RESULT 8

Q7M2Y9_MACFA PRELIMINARY; PRT; 145 AA.

ID Q7M2Y9; AC Q7M2Y9;

DT 01-MAR-2004 (TrEMBLrel. 26, Created)

DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal peptide precursor (Fragment).

OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).

OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Primates; Catarrhini;
OC Cercopithecidae; Cercopithecinae; Macaca.

OX NCBI_TaxID=9541;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
Benson D.L.; Isaacson P.J.; Jones E.G.;
"In situ hybridization reveals Vip precursor mRNA-containing neurons in monkey and rat neocortex.";
Brain Res. Mol. Brain Res. 9:169-174(1991).

RL PIR; A60038; A60038.

DR HSSP; P18509; IGEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone_2; 2.

DR PRINTS; PR00275; GLUCAGON.

DR PROSITE; PS00260; GLUCAGON; 2.

FT NON_TER 1 1

FT NON_TER 145 145

FT SEQUENCE 145 AA; 16324 MW; 1ABE5D98D53FE5C CRC64;

SQ

Query Match 95.8%; Score 137; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 4.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
|||||
Db 100 HSDAVFTDNYRLRKQMAVKKYLNSILN 127
|||||

RESULT 9

Q7TSR4_9MURI PRELIMINARY; PRT; 153 AA.

ID Q7TSR4; AC Q7TSR4;

DT 01-OCT-2003 (TrEMBLrel. 25, Created)

DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)

DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)

DE Vasoactive intestinal polypeptide (Fragment).

OS Arvicanthia ansorgei.

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Euthera; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Arvicanthis.

OX NCBI_TaxID=204747;

RN [1]

RP NUCLEOTIDE SEQUENCE.

RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pevet P.;
Masson-Pevet M.;

RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.

DR ENBL; AY225375; AAP15167.1; -; mRNA.

DR HSSP; P18509; IGEA.

DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR InterPro; IPR000532; Glucagon.

DR Pfam; PF00123; Hormone_2; 2.

DR PRINTS; PR00275; GLUCAGON.

OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominoidea;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=83271523; PubMed=6571696;
RA Itoh N., Obata K.-I., Yanaiharu N., Okamoto H.;
RT "Human preprovasoactive intestinal polypeptide contains a novel PHI-
RT 27-like peptide, PHM-27.";
RL Nature 304:547-549(1983).
RN [2]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=88267775; PubMed=2839091;
RA Yamagami T., Ohsawa K., Nishizawa M., Inoue C., Gotoh E.,
RA Yanaiharu N., Yamamoto H., Okamoto H.;
RT "Complete nucleotide sequence of human vasoactive intestinal
RT peptide/PHM-27 gene and its inducible promoter.";
RL Ann. N. Y. Acad. Sci. 527:87-102(1988).
RN [3]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86004865; PubMed=3899557;
RA Tsukada T., Horovitch S.J., Montminy M.R., Mandel G., Goodman R.H.;
RT "Structure of the human vasoactive intestinal polypeptide gene.";
RL DNA 4:293-300(1985).
RN [4]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=87092456; PubMed=3025882;
RA Linder S., Barkhem T., Norberg A., Persson H., Schalling M.,
RA Hoekfelt T., Magnusson G.;
RT "Structure and expression of the gene encoding the vasoactive
RT intestinal peptide precursor.";
RL Proc. Natl. Acad. Sci. U.S.A. 84:605-609(1987).
RN [5]
RN NUCLEOTIDE SEQUENCE.
RX MEDLINE=86016352; PubMed=2995945; DOI=10.1016/0196-9781(85)90016-6;
RA Delamater J.F., Buell G.N., Kawashima E., Polak J.M., Bloom S.R.;
RT "Vasoactive intestinal peptide: expression of the prohormone in
RT bacterial cells.";
RL Peptides 6:95-102(1985).
RN [6]
RN TISSUE=Prostate;
RC MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins E.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahy J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [7]
RN NUCLEOTIDE SEQUENCE OF 8-170.
RX MEDLINE=86313155; PubMed=3748844; DOI=10.1016/0196-9781(86)90156-7;
RA Gozes I., Bodener M., Shani Y., Fridkin M.;
RT "Structure and expression of the vasoactive intestinal peptide (VIP)
RT gene in a human tumor.";
RL Peptides 7:1-6(1986).
RN [8]
RN NUCLEOTIDE SEQUENCE OF 50-170.
RC TISSUE=Pancratic carcinoma;

RX MEDLINE=84066682; PubMed=6139527; DOI=10.1016/S0140-6736(83)91215-1;
RA Bloom S.R., Delamater J.F., Kawashima E., Christofides N.D.,
RA Buell G., Polak J.M.;
RT "Diarrhoea in vipoma patients associated with cosecretion of a second
RT active peptide (peptide histidine isoleucine) explained by single
RT coding gene.";
RL Lancet 2:1163-1165(1983).
RN [9]
RN NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=87140054; PubMed=2434617;
RA Gozes I., Giladi E., Shani Y.;
RT "Vasoactive intestinal peptide gene: putative mechanism of information
RT storage at the RNA level.";
RL J. Neurochem. 47:1136-1141(1987).
RN [10]
RN PROTEIN SEQUENCE OF 81-122.
RX MEDLINE=88007645; PubMed=3654650;
RA Yangou Y., di Marzo V., Spokes R.A., Panico M., Morris H.R.,
RA Bloom S.R.;
RT "Isolation, characterization, and pharmacological actions of peptide
RT histidine valine 42, a novel prepro-vasoactive intestinal peptide-
RT derived peptide.";
RL J. Biol. Chem. 262:14010-14013(1987).
RN [11]
RN PROTEIN SEQUENCE OF 127-152.
RX TISSUE=Phochromocytoma;
RX MEDLINE=92287083; PubMed=1318039;
RA Kitamura K., Kangawa K., Kawamoto M., Ichiki Y., Matsuo H., Eto T.;
RT "Isolation and characterization of peptides which act on rat
RT platelets, from a pheochromocytoma.";
RL Biochem. Biophys. Res. Commun. 185:134-141(1992).
RN [12]
RN STRUCTURE BY NMR OF VIP.
RX MEDLINE=91322343; PubMed=1863695;
RA Theriault Y., Boulanger Y., St Pierre S.;
RT "Structural determination of the vasoactive intestinal peptide by two-
RT dimensional H-NMR spectroscopy.";
RL Biopolymers 31:459-464(1991).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHM and PHV also cause vasodilation.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC
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CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.

CC EMBL; L00157; AAA61289.1; -; Genomic DNA.
CC EMBL; L00154; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00155; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; L00156; AAA61289.1; JOINED; Genomic DNA.
CC EMBL; M33027; AAA69515.1; -; Genomic DNA.
CC EMBL; M11553; AAA61284.1; -; Genomic DNA.
CC EMBL; M11549; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11550; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11551; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M11552; AAA61284.1; JOINED; Genomic DNA.
CC EMBL; M14623; AAA61288.1; -; Genomic DNA.
CC EMBL; M14619; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14620; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14621; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M14622; AAA61288.1; JOINED; Genomic DNA.
CC EMBL; M36610; AAA61286.1; -; Genomic DNA.
CC EMBL; M36606; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36607; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36608; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; M36609; AAA61286.1; JOINED; Genomic DNA.
CC EMBL; BC009794; AAH09794.1; -; mRNA.
CC EMBL; M36634; AAA61287.1; -; mRNA.

```

DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M32162; AAA61285.1; -; Genomic DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InVDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20
FT PROPEP 21 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CONFLICT 96 97
FT CONFLICT 113 113
FT CONFLICT 116 116
FT CONFLICT 136 136
FT SEQUENCE 170 AA; 19169 MW; 93BC0177F89508FD CRC64;

Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
EX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36.
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

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RT "High conservation of upstream regulatory sequences on the human and
RT mouse vasoactive intestinal peptide (VIP) genes.";
RL DNA Seq. 5:25-29(1994).
CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
CC stimulates myocardial contractility, increases glycogenolysis and
CC relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -1- FUNCTION: PHM also causes vasodilation.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the glucagon family.
CC
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use as long as its content is in no way modified and this statement is not
CC removed.
CC
CC EMBL; X74297; CAA52350.1; -; Genomic DNA.
DR PIR; A60037; A60037.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSMUSG00000019772; Mus musculus.
DR MGI; MGI:98933; Vip.
DR GO; GO:0005615; C:extracellular space; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues; Glucagon family;
KW Glycoprotein; Hormone; Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT MOD_RES 152 152
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19049 MW; 0164C831F85C73D CRC64;

Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYRLRKQMAVKKYLNSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

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```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaihara N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=181524; DOI=10.1016/0169-328X(91)90005-I;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycogenolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRT.
DR HSRP; P18509; IGEA.
DR Ensembl; ENSRNOG00000018808; Rattus norvegicus.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT -----
FT Intestinal peptide PHV-42 (By
FT similarity).
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT -----
FT Isoleucine amide (G-108 provides amide
FT group).
FT MOD_RES 152 152
FT Asparagine amide (G-153 provides amide
FT group).
FT CARBOHYD 68 68
FT CARBOHYD 133 133
FT CARBOHYD 133 133
FT SEQUENCE 170 AA; 19079 MW; 202AEB82EBBD190B CRC64;
SQ
Query Match 95.8%; Score 137; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152
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RESULT 15
QSTCY9 HUMAN
ID QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CA121764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;
Query Match 95.8%; Score 137; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 5.1e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Qy 1 HSDAVFTDNYRLRKQMAVKKYLNSILN 28
Db 125 HSDAVFTDNYTLRLKQMAVKKYLNSILN 152
Search completed: January 25, 2006, 15:18:40
Job time : 76 secs
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:47:12 ; Search time 77.875 Seconds
(without alignments)
157.979 Million cell updates/sec

Title: US-10-626-719-8
Perfect score: 144
Sequence: 1 HSDAVFTDNYTLRKQMRVKYLNSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_21:.*
1: Geneseqp1980s:.*
2: Geneseqp1990s:.*
3: Geneseqp2000s:.*
4: Geneseqp2001s:.*
5: Geneseqp2002s:.*
6: Geneseqp2003s:.*
7: Geneseqp2003bs:.*
8: Geneseqp2004s:.*
9: Geneseqp2005s:.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	144	100.0	28	5	ADH68846
2	141	97.9	28	5	ADH68842
3	140	97.2	28	5	ADH68845
4	138	95.8	28	1	AAP10172
5	138	95.8	28	1	AAP71039
6	138	95.8	28	2	AAR34943
7	138	95.8	28	2	AAR40272
8	138	95.8	28	2	AAR53111
9	138	95.8	28	2	AAR53109
10	138	95.8	28	2	AAR53110
11	138	95.8	28	2	AAR87092
12	138	95.8	28	2	AAR83785
13	138	95.8	28	2	AAR97810
14	138	95.8	28	2	AAR93023
15	138	95.8	28	2	AAW65188
16	138	95.8	28	2	AAW06120
17	138	95.8	28	2	AAW06119
18	138	95.8	28	2	AAW06114
19	138	95.8	28	2	AAW06113
20	138	95.8	28	2	AAW06121
21	138	95.8	28	2	AAW06122
22	138	95.8	28	2	AAW06115
23	138	95.8	28	2	AAW06112
24	138	95.8	28	2	AAW37791

25	138	95.8	28	2	AAW71677	Vasoactiv
26	138	95.8	28	2	AAY30769	Vasoactiv
27	138	95.8	28	2	AAY44196	Human vas
28	138	95.8	28	3	AAY94560	Vasoactiv
29	138	95.8	28	4	AAB85707	Peptide h
30	138	95.8	28	4	AAB85710	Peptide h
31	138	95.8	28	4	AAB91279	Vasoactiv
32	138	95.8	28	4	AAB91278	Vasoactiv
33	138	95.8	28	4	AAE12028	Porcine v
34	138	95.8	28	4	AAB37111	Human vas
35	138	95.8	28	4	AAG70459	Vasoactiv
36	138	95.8	28	4	AAB50845	Human pro
37	138	95.8	28	4	AAU09653	Porcine i
38	138	95.8	28	4	AA45614	Native va
39	138	95.8	28	5	AAE19604	Human ste
40	138	95.8	28	5	AAE19627	Human vas
41	138	95.8	28	5	AAE19603	Human vas
42	138	95.8	28	5	ABB06677	Mammalian
43	138	95.8	28	5	AAU85989	Modified
44	138	95.8	28	5	AAU97783	Tumour sp
45	138	95.8	28	5	ABG94152	Human vas

ALIGNMENTS

RESULT 1
ADH68846
ID ADH68846 standard; peptide; 28 AA.
XX ADH68846;
AC ADH68846;
XX
DT 25-MAR-2004 (first entry)
XX
DE Synthetic VIP analogue #153.
XX
KW conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
KW bladder; cervix.
XX
OS Synthetic.
XX
FN EP1170021-A2.
XX
PD 09-JAN-2002.
XX
PF 14-MAY-2001; 2001EP-00250164.
XX
PR 15-MAY-2000; 2000US-00571407.
XX (SCHD) SCHERING AG.
XX
PI Bauer M, Becker A, Licha K, Bornhop D, Platzek J;
XX
DR WPI; 2002-099222/14.
XX
PT New peptide-lanthanide chelate conjugates, useful in optical or
PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
PT inflammation.
XX
PS Claim 21; SEQ ID NO 156; 97pp; German.
XX
CC This invention describes novel conjugates of vasoactive intestinal
CC peptide (VIP), somatostatin, neurotensin or related peptides with
CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
CC Preparation of the conjugates involves preparing a metal complex, then
CC coupling the product with a peptide by aminolysis of a corresponding
CC active ester. The conjugates can be administered topically or
CC intravenously. The use of the conjugates of the invention are claimed for
CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
CC by an optical detection method or for in vivo fluorescence diagnosis of
CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

SQ Sequence 28 AA;

Query Match 100.0%; Score 144; DB 5; Length 28;
 Best Local Similarity 100.0%; Pred. No. 4.6e-12;
 Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMKVKYLSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

RESULT 2

ADH68842

ID ADH68842 standard; peptide; 28 AA.

XX AC ADH68842;

XX 25-MAR-2004 (first entry)

DE Synthetic VIP analogue #149.

XX conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

XX Synthetic.

XX EP1170021-A2.

XX 09-JAN-2002.

XX 14-MAY-2001; 2001EP-00250164.

XX 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

XX Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

XX New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

XX Claim 21; SEQ ID NO 152; 97pp; German.

XX This invention describes novel conjugates of vasoactive intestinal
 CC peptide (VIP), somatostatin, neurotensin or related peptides with
 CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.
 CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding
 CC active ester. The conjugates can be administered topically or
 CC intravenously. The use of the conjugates of the invention are claimed for
 CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas
 CC by an optical detection method or for in vivo fluorescence diagnosis of
 CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in
 CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or
 CC cervix. The claims also cover (i) a method of endoscopic in-vivo
 CC fluorescence diagnosis, involving applying the conjugates topically by
 CC spraying in the gastrointestinal tract, oesophagus or bladder or by
 CC inhalation to the bronchi, optionally removing non-bonded excess
 CC conjugates by washing and carrying out the endoscopic investigation by
 CC local excitation at a wavelength of 250-450 nm and local detection of the
 CC specific fluorescent radiation emitted by the conjugates and (ii) an
 CC optical diagnostic composition for in vivo diagnosis of diseased tissue
 CC regions, comprising at least one compound conjugated together with
 CC conventional auxiliaries, carriers and/or diluents. The conjugate is also
 CC enriched in the lymph nodes on intravenous administration, and can thus
 CC be used to facilitate identification of the lymph nodes (by fluorescence)
 CC during surgery. The conjugate is selectively enriched in diseased tissue
 CC and after excitation with light of a suitable wavelength provides long-
 CC lasting fluorescence (specifically having a life in the millisecond
 CC range) in the 480-600 nm wavelength region (in which the human eye is
 CC most sensitive), the life of the fluorescence of the conjugate exceeding
 CC that of the autofluorescence of the tissue. The endoscopic diagnosis of
 CC surface tumours is thus facilitated. The conjugates can be applied
 CC topically, e.g. by spraying. ADH68691-ADH68931 represent peptide
 CC conjugates described in the disclosure of the invention.

SQ Sequence 28 AA;

Query Match 97.9%; Score 141; DB 5; Length 28;
 Best Local Similarity 96.4%; Pred. No. 1.2e-11;
 Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMKVKYLSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

RESULT 3

ADH68845

ID ADH68845 standard; peptide; 28 AA.

XX AC ADH68845;

XX 25-MAR-2004 (first entry)

XX Synthetic VIP analogue #152.

XX conjugate; vasoactive intestinal peptide; VIP; somatostatin; neurotensin;
 KW tumour; adenoma; gastrointestinal tract; oesophagus; bronchial tract;
 KW bladder; cervix.

XX Synthetic.

XX EP1170021-A2.

XX 09-JAN-2002.

XX 14-MAY-2001; 2001EP-00250164.

XX 15-MAY-2000; 2000US-00571407.

XX (SCHD) SCHERING AG.

XX Bauer M, Becker A, Licha K, Bornhop D, Platzek J;

XX WPI; 2002-099222/14.

XX New peptide-lanthanide chelate conjugates, useful in optical or
 PT fluorescence methods for diagnosis of diseased tissue, e.g. tumors or
 PT inflammation.

XX PS Claim 21; SEQ ID NO 155; 97pp; German.

XX CC This invention describes novel conjugates of vasoactive intestinal

CC peptide (VIP), somatostatin, neurotensin or related peptides with

CC polyamino poly-carboxylic or -phosphonic acid lanthanide complexes.

CC Preparation of the conjugates involves preparing a metal complex, then

CC coupling the product with a peptide by aminolysis of a corresponding

CC active ester. The conjugates can be administered topically or

CC intravenously. The use of the conjugates of the invention are claimed for

CC in-vivo diagnosis of tumours, other diseased tissue regions or adenomas

CC by an optical detection method or for in vivo fluorescence diagnosis of

CC tumours, tumour cells and/or inflamed tissue by an endoscopic method in

CC the gastrointestinal tract, oesophagus, bronchial tract, bladder or

CC cervix. The claims also cover (i) a method of endoscopic in-vivo

CC fluorescence diagnosis, involving applying the conjugates topically by

CC spraying in the gastrointestinal tract, oesophagus or bladder or by

CC inhalation to the bronchi, optionally removing non-bonded excess

CC conjugates by washing and carrying out the endoscopic investigation by

CC local excitation at a wavelength of 250-450 nm and local detection of the

CC specific fluorescent radiation emitted by the conjugates and (ii) an

CC optical diagnostic composition for in vivo diagnosis of diseased tissue

CC regions, comprising at least one compound conjugated together with

CC conventional auxiliaries, carriers and/or diluents. The conjugate is also

CC enriched in the lymph nodes on intravenous administration, and can thus

CC be used to facilitate identification of the lymph nodes (by fluorescence)

CC during surgery. The conjugate is selectively enriched in diseased tissue

CC and after excitation with light of a suitable wavelength provides long-

CC lasting fluorescence (specifically having a life in the millisecond

CC range) in the 480-600 nm wavelength region (in which the human eye is

CC most sensitive), the life of the fluorescence of the conjugate exceeding

CC that of the autofluorescence of the tissue. The endoscopic diagnosis of

CC surface tumours is thus facilitated. The conjugates can be applied

CC topically, e.g. by spraying. ADH69691-ADH69931 represent peptide

CC conjugates described in the disclosure of the invention.

XX SQ Sequence 28 AA;

Query Match 97.2%; Score 140; DB 5; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.6e-11;

Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 4

AAP10172

ID AAP10172 standard; peptide; 28 AA.

XX AC AAP10172;

XX DT 25-MAR-2003 (revised)

XX DT 21-DEC-1992 (first entry)

XX DE VIP.

XX KW Vasoactive intestinal polypeptide; isolation-inhibiting action.

XX KW allergic asthma. chemical mediator

XX OS Homo sapiens.

XX FN JP56128721-A.

XX PD 08-OCT-1981.

XX PF 12-MAR-1980; 80JP-00030308.

XX PR 12-MAR-1980; 80JP-00030308.

XX PA (EISA) EISA CO LTD.

DR WPI; 1981-86052D/47.

XX PT Antiallergic agent comprises peptide - contg. 28 amino acid units, is

XX PT active against e.g. bronchial asthma and hay fever.

XX PS Claim 1; Page 1; 3pp; Japanese.

XX CC The sequence given can be used as the active component in an antiallergic

CC agent. Vasoactive intestinal polypeptide (VIP) has chemical mediator

CC isolation-inhibiting action and is effective for therapy and prevention

CC of various allergic diseases, such as allergic rhinitis, bronchial

CC asthma, allergic asthma, hay fever, urticaria, eczema, atopic dermatitis

CC etc. Since it also has specific bronchial smooth muscle relaxant action,

CC it is esp. useful for treating and preventing bronchial and allergic

CC asthma. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-

CC 2003 to correct PA field.)

XX SQ Sequence 28 AA;

Query Match 95.8%; Score 138; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.9e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 5

AAP71039

ID AAP71039 standard; peptide; 28 AA.

XX AC AAP71039;

XX DT 03-OCT-2002 (revised)

XX DT 05-APR-1991 (first entry)

XX DE Sequence of active ingredient in hair growth promoting compen.

XX KW Vasoactive intestinal tract polypeptide; digestive tract polypeptide;

XX KW hair growth promoter.

XX OS Synthetic.

XX PN EP225639-A.

XX PD 16-JUN-1987.

XX PF 10-DEC-1986; 86EP-00117190.

XX PR 10-DEC-1985; 85JP-00276099.

XX PA (MEIJ) MEIJI SEIKA KAISHA.

XX PI Yanaihara N, Watanabe S, Kasai M, Sato T, Kikkaji T;

XX WPI; 1987-164873/24.

XX PT Hair growth promoting compen. - contg. vasoactive intestinal polypeptide

XX PT and carrier.

XX PS Claim 1; Page 8; 10pp; English.

XX CC When applied to the skin, the peptide causes a local increase in blood

XX CC flow and promotes hair growth. It is the natural peptide known as

XX CC vasoactive intestinal polypeptide which has been isolated from the

XX CC digestive tract. (Updated on 03-OCT-2002 to add missing OS field.)

XX SQ Sequence 28 AA;

Query Match 95.8%; Score 138; DB 1; Length 28;

Best Local Similarity 96.4%; Pred. No. 2.9e-11;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;


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QY 1 HSDAVFTDNYTLRLKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLSILN 28

RESULT 6
AAR34943
ID AAR34943 standard; peptide; 28 AA.
XX AAR34943;
XX 25-MAR-2003 (revised)
DT 28-JUL-1993 (first entry)
XX Porcine VIP.
XX Vasoactive intestinal peptide; asthma; bronchodilation activity;
KW bronchiotracheal constrictive disorders.
XX Sus scrofa.
XX EP536741-A2.
XX 14-APR-1993.
XX 08-OCT-1992; 92EP-00117185.
XX 11-OCT-1991; 91US-00773747.
XX (HOFF ) HOFFMANN LA ROCHE & CO AG F.
XX Bolin DR, Odonnell M;
XX WPI; 1993-118996/15.
XX New cyclic vasoactive intestinal peptide (VIP) analogues - are useful for
PT the treatment of bronchotracheal constrictive disorders e.g. asthma.
XX Disclosure; Page 65; 141pp; English.
XX The sequence is that of porcine vasoactive intestinal peptide (VIP) as
CC claimed in EP-325044. The peptide sequence was used to design cyclic
CC analogues of VIP which have enhanced bronchodilation activity without any
CC observable side effects such as cardiovascular side effects. The
CC bronchodilation produced by the analogues can be sustained for more than
CC two hours. The analogues may be used for the treatment of bronchotracheal
CC constrictive disorders, e.g. asthma. See also RR3944-5016. (Updated on 25
CC -MAR-2003 to correct PN field.)
XX Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYTLRLKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLSILN 28

RESULT 8
AAR53111
ID AAR53111 standard; peptide; 28 AA.
XX AAR53111;
XX 20-DEC-1994 (first entry)
XX Bronchodilator peptide #21.
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
XX Synthetic.
XX Key Location/Qualifiers
FT Misc-difference 10 /note= "D-form residue"
FT Misc-difference 22 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
XX JP06092991-A.
XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX

side effect; bronchoconstrictive disorder; asthma.
Sus scrofa.
Key Location/Qualifiers
Modified-site 28 /note= "C-terminal is amidated"
US5234907-A.
10-AUG-1993.
24-APR-1991; 91US-00690300.
30-JUN-1989; 89US-00374503.
(HOFF ) HOFFMANN LA ROCHE INC.
Bolin DR;
WPI; 1993-264645/33.
New vasoactive intestinal peptide analogues - are potent bronchodilators
without cardiovascular side effects, used for treating, e.g. asthma.
Disclosure; Page 25-26; 66pp; English.
VIP (AAR40272) was used in the prodn. of analogues (AAR40273-78: generic
formulatae; AAR40279-364: examples). The VIP analogues are potent
bronchodilators and have no cardiovascular side effects. They are used
for the treatment of bronchoconstrictive disorders, e.g. asthma. (Updated
on 25-MAR-2003 to correct PF field.)
Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYTLRLKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRLKQMAVKKYLSILN 28

RESULT 8
AAR53111
ID AAR53111 standard; peptide; 28 AA.
XX AAR53111;
XX 20-DEC-1994 (first entry)
XX Bronchodilator peptide #21.
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
KW selectively; toxicity; mammal; bronchodilator.
XX Synthetic.
XX Key Location/Qualifiers
FT Misc-difference 10 /note= "D-form residue"
FT Misc-difference 22 /note= "D-form residue"
FT Modified-site 28 /note= "Amidated C-terminal"
XX JP06092991-A.
XX 05-APR-1994.
XX 28-FEB-1991; 91JP-00034335.
XX

Vasoactive intestinal peptide; VIP; bronchodilator; cardiovascular;
```


PR 28-FEB-1991; 91JP-00034335.
XX (DAIL) DAICEL CHEM IND LTD.
XX (MEIJ) MEIJI SEIKA KAISHA.
XX WPI, 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
XX The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
XX capable of bonding to the amino acid at the carboxy terminal through a
XX carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. NO. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNTYTLRKQMRVKYKLSILN 28
DB 1 HSDAVFTDNTYTLRKQMRVKYKLSILN 28
RESULT 9
AAR53109
ID AAR53109 standard; peptide; 28 AA.
XX
AC AAR53109;
XX
XX 20-DEC-1994 (first entry)
XX
DE Bronchodilator peptide #19.
XX
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
XX Key Location/Qualifiers
XX Misc-difference 10 /note= "D-form residue"
XX Modified-site 28 /note= "Amidated C-terminal"
XX
XX JP06092991-A.
XX
XX 05-APR-1994.
XX
XX 28-FEB-1991; 91JP-00034335.
XX
XX 28-FEB-1991; 91JP-00034335.
XX
XX (DAIL) DAICEL CHEM IND LTD.
XX (MEIJ) MEIJI SEIKA KAISHA.
XX
XX WPI, 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
XX The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to

CC mammals. These peptides may be used as bronchodilators. They are prepared
CC by solid phase synthesis using a resin having an amino functional group
CC capable of bonding to the amino acid at the carboxy terminal through a
CC carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. NO. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNTYTLRKQMRVKYKLSILN 28
DB 1 HSDAVFTDNTYTLRKQMRVKYKLSILN 28
RESULT 10
AAR53110
ID AAR53110 standard; peptide; 28 AA.
XX
XX AAR53110;
XX
XX 20-DEC-1994 (first entry)
XX
DE Bronchodilator peptide #20.
XX
XX Peptide; vasoactive intestinal peptide; VIP; relax; smooth muscle;
XX selectively; toxicity; mammal; bronchodilator.
XX
OS Synthetic.
XX
XX Key Location/Qualifiers
XX Misc-difference 22 /note= "D-form residue"
XX Modified-site 28 /note= "Amidated C-terminal"
XX
XX JP06092991-A.
XX
XX 05-APR-1994.
XX
XX 28-FEB-1991; 91JP-00034335.
XX
XX 28-FEB-1991; 91JP-00034335.
XX
XX (DAIL) DAICEL CHEM IND LTD.
XX (MEIJ) MEIJI SEIKA KAISHA.
XX
XX WPI, 1994-147946/18.
XX
XX Active peptide(s), having smooth muscle relaxing activity - useful as
XX bronchodilators.
XX
XX Disclosure; Page 5; 29pp; Japanese.
XX
XX The sequences given in AAR53091-111 are synthetic peptides based on
XX vasoactive intestinal peptide (VIP) which have the activity of relaxing
XX the smooth muscle selectively and are only low toxic-non- toxic to
XX mammals. These peptides may be used as bronchodilators. They are prepared
XX by solid phase synthesis using a resin having an amino functional group
XX capable of bonding to the amino acid at the carboxy terminal through a
XX carboxyl group and fixing the peptide chain during the synthesis
XX
SQ Sequence 28 AA;
Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. NO. 2.9e-11;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 HSDAVFTDNTYTLRKQMRVKYKLSILN 28
DB 1 HSDAVFTDNTYTLRKQMRVKYKLSILN 28

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RESULT 11
AAR87092
ID AAR87092 standard; peptide; 28 AA.
XX
AC AAR87092;
XX
DT 06-JUN-1996 (first entry)
XX
XX Vasoactive intestinal peptide, forms part of gene transfer complex.
DE
XX Porcine; VIP; cell surface receptor; ligand; gene transfer; transfection;
KW gene therapy; vaccine.
XX
XX Sus scrofa.
XX
FH Key Location/Qualifiers
FT Modified-site 28
FT /note= "amidated"
XX
XX PR2719316-A1.
XX
XX 03-NOV-1995.
XX
XX 28-APR-1994; 94PR-00005174.
XX
XX 28-APR-1994; 94PR-00005174.
XX
XX (IDMI-) IDM IMMUNO-DESIGNED MOLECULES.
XX
XX Midoux P, Erbacher P, Roche-Degremont A, Monsigny M;
XX WPI; 1995-375617/49.
XX
XX New nucleic acid complexes with cationic polymers - useful for genetic
XX transformation of cells.
XX
XX Claim 11; Page 43; 58pp; French.
XX
XX In novel complexes of negatively-charged nucleic acids and positively-
XX charged polymers, the polymers comprise monomer subunits bearing NH3+
XX groups, at least 10% of which are replaced by uncharged amino groups
XX bearing a substit. that has at least one -OH group and is not recognised
XX by cell membrane receptors; the side-chain groups of the polymer (i.e.
XX the NH3+ and/or OH groups) may be substd. by a group that is recognised
XX by a cell membrane receptor, provided that at least 30% of the NH3+
XX groups remain free. The complexes are useful for transfecting on the
XX nucleic acid sequences into particular cell types, depending on the
XX identity of the cell membrane receptor ligands involved, e.g. for gene
XX therapy or prepn. of vaccines. Preferred ligands are oligoglycoside
XX antigens recognised by lectins, natural metabolites (such as biotin,
XX tetrahydrofolate, folic acid or carnitine) or peptides (pref. vasoactive
XX intestinal peptide, atrial natriuretic peptide, lipocortin, bradykinin,
XX peptide hormones such as alpha-MSH, chemotactic factors and integrin
XX ligands)
XX
XX Sequence 28 AA;
XX
XX Query Match 95.8%; Score 138; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 2.9e-11;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
XX QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
XX ||||||||||||||||||||||||||||
XX Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
XX
XX RESULT 12
XX AAR83785
XX ID AAR83785 standard; peptide; 28 AA.
XX
XX AC AAR83785;
XX
XX Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX burn; decubitis; diabetes; ulcer; bedsore; pressure sore.
XX
XX Synthetic.

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DT 27-FEB-1996 (first entry)
XX
DE VIP.
XX
KW VIP; vasoactive intestinal polypeptide; peptide hormone; glucagon;
KW secretin; nervous system; digestive system; smooth muscle; relaxant;
KW bronchial asthma; impotence; therapy.
XX
OS Sus scrofa.
XX
FH Key Location/Qualifiers
FT Misc-difference 29
FT /note= "amidated"
XX
XX EP663406-A1.
XX
XX 19-JUL-1995.
XX
XX 19-DEC-1994; 94EP-00120126.
XX
XX 20-DEC-1993; 93JP-00319815.
XX
XX (SANW ) SANWA KAGAKU KENKYUSHO CO.
XX
XX Noda H, Yamakawa H, Yoshina S, Ishida T, Tomiya N;
XX WPI; 1995-247502/33.
XX
XX New modified form of vasoactive intestinal polypeptide - with C-terminal
XX substed. amide residue, has greater in vivo stability and persistence,
XX useful for treating asthma and impotence.
XX
XX Disclosure; Page 3; 16pp; English.
XX
XX This sequence represents vasoactive intestinal polypeptide (VIP). VIP is
XX a peptide hormone that shows smooth muscle relaxant activity. The
XX structure of VIP is similar to that of the other peptides in the glucagon
XX -secretin family, to which it belongs. VIP is present in the nervous
XX system and the digestive system tracts. It is also found in the lungs of
XX normal patients (however, it is not found in the lungs of people
XX suffering from bronchial asthma). The sequences shown in AAR83784 and
XX AAR83786 are analogues of this sequence. These analogues are found to be
XX resistant to protease digestion. The analogues can be used to treat
XX asthma (by inhalation) and impotence (percutaneously). Compared to
XX natural VIP, the analogue sequences have better in vivo stability. The
XX analogue sequences are also more persistent than natural VIP and have
XX excellent affinity for biological membranes
XX
XX Sequence 28 AA;
XX
XX Query Match 95.8%; Score 138; DB 2; Length 28;
XX Best Local Similarity 96.4%; Pred. No. 2.9e-11;
XX Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
XX QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
XX ||||||||||||||||||||||||||||
XX Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
XX
XX RESULT 13
XX AAR97810
XX ID AAR97810 standard; peptide; 28 AA.
XX
XX AC AAR97810;
XX
XX 22-AUG-1996 (first entry)
XX
XX Vasoactive Intestinal Peptide VIP(1-28), for dermal ulcer treatment.
XX
XX Vasoactive intestinal peptide; VIP; vasodilation; hyperkinemic; skin;
XX burn; decubitis; diabetes; ulcer; bedsore; pressure sore.
XX
XX Synthetic.

```

XX Key Location/Qualifiers
 FT Modified-site 28 /note= "amidated"
 FT
 XX
 PN JP08040926-A.
 XX
 XX 13-FEB-1996.
 PD
 XX 03-AUG-1994; 94JP-00182457.
 PP
 XX 03-AUG-1994; 94JP-00182457.
 PR
 XX (YAKU-) YAKURIGAKU CHUO KENKYUSHO KK.
 PA
 XX WPI; 1996-157021/16.
 DR
 XX Remedy for dermal ulcer - comprises vasoactive intestinal polypeptide as
 PT active component.
 FT
 XX
 PS Claim 1; Page 2; 4pp; Japanese.
 XX
 CC Vasoactive intestinal peptide and related compounds are known to have
 CC strong vasodilatory activity. They have now been found to be effective in
 CC the treatment of skin ulcers, esp. decubitus ulcers but also burn ulcers,
 CC diabetic ulcers, etc. VIP(1-28) is the preferred peptide for use in the
 CC novel skin ulcer remedy
 CC
 XX Sequence 28 AA;
 SQ

Query Match 95.8%; Score 138; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
 |||||

RESULT 14
 AAR93023
 ID AAR93023 standard; protein; 28 AA.
 XX
 AC AAR93023;
 XX
 DT 09-AUG-1996 (first entry)
 XX
 DE Human glucagon degrading enzyme - VIP substrate.
 XX
 KW Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
 KW vasoactive intestinal peptide; VIP; pancreatic carcinoma cell line; PCR;
 KW amplification; polymerase chain reaction; probe; expression vector;
 KW eukaryote; SV40 promoter; COS-7.
 XX
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 FT Cleavage-site 17. .18
 FT Modified-site 28 /note= "contains C-terminal amide group"
 FT
 XX JP08023972-A.
 PN
 XX 30-JAN-1996.
 PD
 XX 19-JUL-1994; 94JP-00187936.
 PF
 XX 19-JUL-1994; 94JP-00187936.
 PR
 XX (SUNR) SUNTORY LTD.
 PA
 XX WPI; 1996-133414/14.
 DR
 XX

PT New glucagon decomposing enzyme, and DNA encoding it - for specifically
 PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
 PT and treatment of diseases caused by excess glucagon and VIP.
 XX
 XX Claim 1; Page 2; 18pp; Japanese.
 PS
 XX A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
 CC isolated from a human pancreatic carcinoma cell line HPC-YO cDNA library.
 CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
 CC cleavage of glucagon, vasoactive intestinal peptide and selectin
 CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
 CC library with an anti-GDE peptide antibody, amplifying the inserts with
 CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
 CC This screening resulted in the full length clone designated lambda GDE4-
 CC 2. The coding region of the clone was subsequently PCR amplified by the
 CC primers AAT11576-7 and inserted into the eukaryotic expression vector
 CC PKOCR under control of the SV40 promoter for production of the protein in
 CC COS-7 cells. The protein is useful in preventing and treating diseases
 CC characterised by an excess of glucagon or vasoactive intestinal peptide
 XX
 SQ Sequence 28 AA;
 Query Match 95.8%; Score 138; DB 2; Length 28;
 Best Local Similarity 96.4%; Pred. No. 2.9e-11;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
 |||||
 DB 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
 |||||

RESULT 15
 AAW65188
 ID AAW65188 standard; peptide; 28 AA.
 XX
 AC AAW65188;
 XX
 DT 02-OCT-1998 (first entry)
 XX
 DE Vasoactive intestinal peptide (VIP) analogue.
 XX
 KW Bradykinin; N-benzylglycine; agonist; receptor study; antagonist;
 KW achiral; analgesic; luteinising hormone-releasing hormone; LHRH;
 KW vasopressin; vasoactive intestinal peptide; VIP.
 XX
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 FT Modified-site 28 /note= "C-terminal amide"
 FT
 XX US5527882-A.
 PN
 XX 18-JUN-1996.
 PD
 XX 07-NOV-1994; 94US-00335202.
 PF
 XX 07-JUL-1989; 89US-00376839.
 PR
 XX 16-SEP-1992; 92US-00945664.
 PR
 XX (REGC) UNIV CALIFORNIA.
 PA
 XX Young JD, Mitchell AR;
 PI
 XX WPI; 1996-299898/30.
 DR
 XX New bradykinin analogues contg. N-benzyl-glycine - useful as bradykinin
 PT agonists or antagonists, useful e.g. as analgesics.
 PT
 XX Disclosure; Col 7-8; 15pp; English.
 PS
 XX The invention relates to the obtaining of a potent agonist or antagonist
 CC peptide by the replacement of selected amino acids with synthetic achiral

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:57:08 ; Search time 21.875 Seconds
(without alignments)
105.825 Million cell updates/sec

Title: US-10-626-719-8
Perfect score: 144
Sequence: 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : Issued Patents AA:*

1: /cgn2_6/ptodata/1/iaa/5_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/6_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/H_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/PCRTUS_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/RE_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	144	100.0	28	2	US-09-528-200-8
2	144	100.0	28	2	US-09-528-200-121
3	141	97.9	28	2	US-09-528-200-117
4	140	97.2	28	2	US-09-528-200-120
5	138	95.8	28	1	US-07-690-300B-1
6	138	95.8	28	1	US-07-676-987A-1
7	138	95.8	28	1	US-07-868-906-1
8	138	95.8	28	1	US-08-201-092-1
9	138	95.8	28	1	US-07-924-054-11
10	138	95.8	28	1	US-08-243-082-1
11	138	95.8	28	1	US-08-361-443-1
12	138	95.8	28	1	US-08-288-681A-1
13	138	95.8	28	1	US-07-776-272-26
14	138	95.8	28	1	US-08-308-729-1
15	138	95.8	28	1	US-08-062-472B-40
16	138	95.8	28	1	US-08-171-701A-1
17	138	95.8	28	1	US-08-741-678-1
18	138	95.8	28	1	US-08-519-180-2
19	138	95.8	28	1	US-08-414-424-1
20	138	95.8	28	1	US-08-413-708B-1
21	138	95.8	28	1	US-08-618-253-37
22	138	95.8	28	1	US-08-897-624-1
23	138	95.8	28	2	US-08-930-845-1
24	138	95.8	28	2	US-08-952-568-3
25	138	95.8	28	2	US-08-952-568-4
26	138	95.8	28	2	US-08-952-568-5
27	138	95.8	28	2	US-08-952-568-6

28	138	95.8	28	2	US-08-952-568-10	Sequence 10, Appl
29	138	95.8	28	2	US-08-952-568-11	Sequence 11, Appl
30	138	95.8	28	2	US-08-952-568-12	Sequence 12, Appl
31	138	95.8	28	2	US-08-952-568-13	Sequence 13, Appl
32	138	95.8	28	2	US-09-192-048-21	Sequence 21, Appl
33	138	95.8	28	2	US-08-893-749-2	Sequence 2, Appl
34	138	95.8	28	2	US-08-818-252-37	Sequence 37, Appl
35	138	95.8	28	2	US-09-260-846-16	Sequence 16, Appl
36	138	95.8	28	2	US-08-842-322-31	Sequence 31, Appl
37	138	95.8	28	2	US-09-333-842-1	Sequence 1, Appl
38	138	95.8	28	2	US-09-446-352B-1	Sequence 1, Appl
39	138	95.8	28	2	US-09-316-919-53	Sequence 53, Appl
40	138	95.8	28	2	US-09-630-335-1	Sequence 1, Appl
41	138	95.8	28	2	US-09-629-632A-1	Sequence 1, Appl
42	138	95.8	28	2	US-09-528-200-119	Sequence 119, App
43	138	95.8	28	2	US-09-528-200-196	Sequence 196, App
44	138	95.8	28	2	US-09-316-920A-53	Sequence 53, Appl
45	138	95.8	28	2	US-09-646-046-1	Sequence 1, Appl

ALIGNMENTS

RESULT 1
US-09-528-200-8
; Sequence 8, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHIA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENER, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528.200
; CURRENT FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; PRIOR FILING DATE: 1999-09-04
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-8

Query Match 100.0%; Score 144; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 5.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 HSDAVFTDNYTLRKQMKVKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMKVKYLSILN 28

RESULT 2
US-09-528-200-121
; Sequence 121, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHIA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN

```
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENR, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 121
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-121

Query Match          100.0%; Score 144; DB 2; Length 28;
Best Local Similarity 100.0%; Pred. No. 5.5e-14;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMRVKKYLNSILN 28

RESULT 3
US-09-528-200-117
; Sequence 117, Application US/09528200
; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENR, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 117
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-117

Query Match          97.9%; Score 141; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.5e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMRVKKYLNSILN 28

RESULT 4
US-09-528-200-120
; Sequence 120, Application US/09528200
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; Patent No. 6630570
; GENERAL INFORMATION:
; APPLICANT: LICHA, KAI
; APPLICANT: BECKER, ANDREAS
; APPLICANT: SEMMLER, WOLFHARD
; APPLICANT: WEIDENMANN, BERTRAM
; APPLICANT: HESSNIUS, CARTSEN
; APPLICANT: VOLKMER-ENGERT, RUDOLF
; APPLICANT: SCHNEIDER-MERGENR, JENS
; APPLICANT: BHARGAVA, SARAH
; TITLE OF INVENTION: SHORT-CHAIN PEPTIDE-DYE CONJUGATES AS CONTRAST MEDIA
; FILE REFERENCE: SCH-1731
; CURRENT APPLICATION NUMBER: US/09/528,200
; PRIOR FILING DATE: 2000-03-17
; PRIOR APPLICATION NUMBER: DE 199 17 713.9
; NUMBER OF SEQ ID NOS: 196
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 120
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: peptide
US-09-528-200-120

Query Match          97.2%; Score 140; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 2.1e-13;
Matches 27; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKKYLNSILN 28
Db 1 HSDAVFTDNYTLRKQMRVKKYLNSILN 28

RESULT 5
US-07-690-300B-1
; Sequence 1, Application US/07690300B
; Patent No. 5234907
; GENERAL INFORMATION:
; APPLICANT: Bolin, David R.
; TITLE OF INVENTION: Synthetic Vasoactive Intestinal Peptide
; NUMBER OF SEQUENCES: 93
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Hoffmann-La Roche Inc.
; STREET: 340 Kingsland Street
; CITY: Nutley
; STATE: New Jersey
; COUNTRY: USA
; ZIP: 07110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/690,300B
; FILING DATE: 19910424
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/374,503
; FILING DATE: 30-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: Pokras, Bruce A.
; REGISTRATION NUMBER: 32,748
; REFERENCE/DOCKET NUMBER: 8480
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (201) 235-5801
; TELEFAX: (201) 235-3500
; INFORMATION FOR SEQ ID NO: 1:
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SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Sus scrofa
US-07-690-300B-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLSILN 28

RESULT 6

US-07-676-987A-1
Sequence 1, Application US/07676987A
Patent No. 5273963

GENERAL INFORMATION:
APPLICANT: TERRY W. MOODY
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TREATING SMALL
TITLE OF INVENTION: CELL AND NONSMALL CELL LUNG CANCERS
NUMBER OF SEQUENCES: 2

CORRESPONDENCE ADDRESS:

ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
STREET: 555 THIRTEENTH ST. N.W.
CITY: WASHINGTON
STATE: D. C.
COUNTRY: U. S.
ZIP: 20004

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/676.987A
FILING DATE: 19910329

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: REPPER, GEORGE R.
REGISTRATION NUMBER: 31,414
REFERENCE/DOCKET NUMBER: 1783-101
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 783-6040
TELEFAX: (202) 783-6031

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 28 amino acids

TYPE: AMINO ACID

TOPOLOGY: linear

MOLECULE TYPE: peptide

US-07-676-987A-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLSILN 28

RESULT 7

US-07-868-906-1
Sequence 1, Application US/07868906
Patent No. 5376637

GENERAL INFORMATION:
APPLICANT: Sawai, Kiichi
APPLICANT: Kuroono, Masayasu
APPLICANT: Mitani, Takahiko
APPLICANT: Sato, Makoto
APPLICANT: Takahashi, Haruo
APPLICANT: Ohwaki, Hiroyuki
TITLE OF INVENTION: PHARMACEUTICAL PREPARATION CONTAINING
TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE OR ITS ANALOGUE
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:

ADDRESSEE: Nikaido, Marmelstein, Murray & Oram
STREET: 1725 K St. N.W. Suite 1000
CITY: Washington
STATE: D. C.
COUNTRY: USA
ZIP: 20006

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/868.906
FILING DATE: 19920416

CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: JP 3-90671

FILING DATE: 22-APR-1991

ATTORNEY/AGENT INFORMATION:

NAME: Oram Jr., George E.

REGISTRATION NUMBER: 27,931

REFERENCE/DOCKET NUMBER: 920238N

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 659-2930

TELEFAX: (202) 887-0357

TELEX: 440142

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 28 amino acids

TYPE: AMINO ACID

TOPOLOGY: linear

MOLECULE TYPE: peptide

US-07-868-906-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMAVKKYLSILN 28

RESULT 8

US-08-201-092-1
Sequence 1, Application US/08201092
Patent No. 5428015

GENERAL INFORMATION:

APPLICANT: KUROONO, Masayasu

APPLICANT: MITANI, Takahiko

APPLICANT: TAKAHASHI, Haruo

APPLICANT: SAWAI, Kiichi

TITLE OF INVENTION: VASOACTIVE INTESTINAL POLYPEPTIDE

TITLE OF INVENTION: ANALOGUES AND USE THEREOF

NUMBER OF SEQUENCES: 4

CORRESPONDENCE ADDRESS:

ADDRESSEE: Armstrong, Nikaido, Marmelstein, Kubovcik, &

STREET: 1725 K St. N.W. Suite 1000

CITY: Washington

STATE: D. C.

COUNTRY: U. S. A.

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; ZIP: 20006
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/201,092
; FILING DATE: 24-FEB-1994
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-165739
; FILING DATE: 26-JUN-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP 2-408425
; FILING DATE: 27-DEC-1990
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/704,143
; FILING DATE: 22-MAY-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Oram Jr., George E.
; REGISTRATION NUMBER: 27,931
; REFERENCE/DOCKET NUMBER: N910809
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)-659-2930
; TELEFAX: (202)-887-0357
; TELEX: 440142
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: C-terminal
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; TISSUE TYPE: Small intestine, proximal
; US-08-201-092-1

Query Match          95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28
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Db 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28

RESULT 9
US-07-924-054-11
; Sequence 11, Application US/07924054
; Patent No. 5486472
; GENERAL INFORMATION:
; APPLICANT: SUZUKI, No. 5486472uhiro
; APPLICANT: KITADA, Chieko
; APPLICANT: TSUDA, Masao
; TITLE OF INVENTION: ANTIBODY TO PACAP AND USE THEREOF
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
; ADDRESSEE: CUSHMAN
; STREET: 130 Water Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: US
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/924,054
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; FILING DATE: 19920903
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: RESNICK, David S
; REGISTRATION NUMBER: 34235
; REFERENCE/DOCKET NUMBER: 40805
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617)523-3400
; TELEFAX: (617)523-6440
; TELEX: 200291 STRE UR
; INFORMATION FOR SEQ ID NO: 11:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: procein
; US-07-924-054-11

Query Match          95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28
| | | | | | | | | | | | | | | | | |
Db 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28

RESULT 10
US-08-243-082-1
; Sequence 1, Application US/08243082
; Patent No. 5506120
; GENERAL INFORMATION:
; APPLICANT: YAMAMOTO, Hiroaki
; APPLICANT: YAMASHITA, Kunihiro
; TITLE OF INVENTION: METHOD OF PRODUCING PEPTIDES OR
; TITLE OF INVENTION: PROTEINS
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Spencer, Frank & Schneider
; STREET: 1111 Nineteenth Street, N.W.
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20036
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/243,082
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/07/853,754
; FILING DATE: 05-JUN-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Schneller, John W.
; REGISTRATION NUMBER: 26,031
; REFERENCE/DOCKET NUMBER: KUWAT 0010
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 828-8000
; TELEFAX: (202) 828-8038
; TELEX: SPENCER 64267
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
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US-08-243-082-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 11

US-08-361-443-1
; Sequence 1, Application US/08361443
; Patent No. 5521157
; GENERAL INFORMATION:
; APPLICANT: No. 5521157a, Hitoshi
; APPLICANT: Yamakawa, Hidehumi
; APPLICANT: Yoshina, Shigeaki
; APPLICANT: Ishida, Tsutomu
; APPLICANT: Tomiya, No. 5521157oru
; TITLE OF INVENTION: MODIFIED POLYPEPTIDE COMPOUND AND USE OF
; TITLE OF INVENTION: THE SAME
; NUMBER OF SEQUENCES: 3
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
; STREET: 2100 Pennsylvania Ave.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/361.443
; FILING DATE:
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: JP Hei. 5-319815
; FILING DATE: 20-DEC-1993
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-361-443-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 12

US-08-288-681A-1
; Sequence 1, Application US/08288681A
; Patent No. 5595897
; GENERAL INFORMATION:
; APPLICANT: MIDOUX, PATRICK; ERBACHER,
; APPLICANT: PATRICK; ROCHE-DECREMONT, ANNIE-CLAUDE;
; APPLICANT: MONSIGNY, MICHEL
; TITLE OF INVENTION: NEW COMPLEXES OF NUCLEIC
; TITLE OF INVENTION: ACID AND POLYMER, THEIR PROCESS OF
; TITLE OF INVENTION: PREPARATION AND THEIR USAGE FOR TRANSFECTION
; TITLE OF INVENTION: OF CELLS

; NUMBER OF SEQUENCES: 7
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BIERMAN & MUSERLIAN
; STREET: 600 THIRD AVENUE
; CITY: NEW YORK
; STATE: NEW YORK
; COUNTRY: USA
; ZIP: 10016
; COMPUTER READABLE FORM:
; MEDIUM TYPE: FLOPPY DISK
; COMPUTER: IBM PC COMPATIBLE
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/288, 681A
; FILING DATE: 10-AUG-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: FR/94/05174
; FILING DATE: 28-APR-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: CHARLES A. MUSERLIAN
; REGISTRATION NUMBER: 19,683
; REFERENCE/DOCKET NUMBER: 410.005
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 661-8000
; TELEFAX: (212) 661-8002
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 28
; TYPE: Amino Acid
; STRANDEDNESS: Unknown
; TOPOLOGY: Unknown
; MOLECULE TYPE: PEPTIDE
US-08-288-681A-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 13

US-07-776-272-26
; Sequence 26, Application US/07776272
; Patent No. 5612454
; GENERAL INFORMATION:
; APPLICANT: Kaminuma, Toshihiko
; APPLICANT: Iida, Toshii
; APPLICANT: Tajima, Masahiro
; TITLE OF INVENTION: Process for Purification of Polypeptide
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wegner, Cantor, Mueller & Player
; STREET: 1233 20th St. N.W. P.O. Box 18218
; CITY: Washington
; STATE: District of Columbia
; COUNTRY: United States of America
; ZIP: 20036-8218
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/776.272
; FILING DATE: 19911129
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Player, William E

REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-450-23167
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELEFAX: 202-887-0605
TELEX: 440706
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: YES
US-07-776-272-26

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28

RESULT 14

US-08-308-729-1
Sequence 1, Application US/08308729
Patent No. 5677419
GENERAL INFORMATION:
APPLICANT: Bolin, David R.
TITLE OF INVENTION: Cyclic Vasoactive Peptide
TITLE OF INVENTION: Analogs
NUMBER OF SEQUENCES: 73
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: USA
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/308,729
FILING DATE:
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/153,530
FILING DATE:
APPLICATION NUMBER: US 07/773,747
FILING DATE: 11-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pokras, Bruce A.
REGISTRATION NUMBER: 32,748
REFERENCE/DOCKET NUMBER: 8322
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-5801
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Sus scrofa
PUBLICATION INFORMATION:
DOCUMENT NUMBER: EP 325 044 A A

FILING DATE: 22-DEC-1987
PUBLICATION DATE: 26-JUL-1989
RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 18 TO 23
US-08-308-729-1

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28

RESULT 15

US-08-062-472B-40
Sequence 40, Application US/08062472B
Patent No. 5693954
GENERAL INFORMATION:
APPLICANT: Sherwood, Nancy G M
APPLICANT: Parker, David B
APPLICANT: McRory, John E
APPLICANT: Lescheid, David W
TITLE OF INVENTION: DNA ENCODING TWO FISH NEUROPEPTIDES
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: KLARQUIST, LLP
ADDRESS: WHINSTON, LLP
STREET: ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
CITY: PORTLAND
STATE: OREGON
COUNTRY: USA
ZIP: 97204-2988
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/062,472B
FILING DATE: 14-MAY-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: POLLEY, RICHARD J
REGISTRATION NUMBER: 28107
TELECOMMUNICATION INFORMATION:
TELEPHONE: (503) 226-7391
TELEFAX: (503) 228-9446
INFORMATION FOR SEQ ID NO: 40:
SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-062-472B-40

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTRLRKQMKVKKYLSILN 28

Search completed: January 25, 2006, 15:23:44
Job time : 21.875 secs

Result No.	Score	Query			DB	ID	Description
		Match	Length				
1	138	95.8	28	3	US-09-929-818-1	Sequence 1, Appli	
2	138	95.8	28	3	US-09-999-745-53	Sequence 53, Appl	
3	138	95.8	28	3	US-09-554-000-37	Sequence 37, Appl	
4	138	95.8	28	4	US-10-090-109A-1	Sequence 1, Appli	
5	138	95.8	28	4	US-10-044-722-8	Sequence 8, Appli	
6	138	95.8	28	4	US-10-004-530A-17	Sequence 17, Appl	
7	138	95.8	28	4	US-10-114-716A-3	Sequence 3, Appli	
8	138	95.8	28	4	US-10-211-99A-1	Sequence 1, Appli	
9	138	95.8	28	4	US-10-197-954-145	Sequence 145, App	
10	138	95.8	28	4	US-10-100-256B-1	Sequence 1, Appli	
11	138	95.8	28	4	US-10-254-569A-1	Sequence 1, Appli	
12	138	95.8	28	4	US-10-201-288-31	Sequence 31, Appl	
13	138	95.8	28	4	US-10-343-654-22	Sequence 22, Appl	
14	138	95.8	28	4	US-10-416-821-1	Sequence 1, Appli	
15	138	95.8	28	4	US-10-467-059-14	Sequence 14, Appl	
16	138	95.8	28	5	US-10-494-634-7	Sequence 7, Appli	
17	138	95.8	28	5	US-10-718-071-36	Sequence 36, Appl	
18	138	95.8	28	5	US-10-788-563-17	Sequence 17, Appl	
19	138	95.8	28	5	US-10-760-085-145	Sequence 145, App	
20	138	95.8	28	5	US-10-892-981A-1	Sequence 1, Appli	
21	138	95.8	28	5	US-10-769-803-2	Sequence 2, Appli	
22	138	95.8	28	5	US-10-919-325-32	Sequence 32, Appl	
23	138	95.8	28	5	US-10-898-143-1	Sequence 1, Appli	
24	138	95.8	28	5	US-10-930-548-3	Sequence 3, Appli	
25	138	95.8	28	5	US-10-770-712-56	Sequence 56, Appl	
26	138	95.8	28	5	US-10-799-897A-1	Sequence 1, Appli	
27	138	95.8	28	6	US-11-066-697-454	Sequence 454, App	

; PRIOR APPLICATION NUMBER: 09/316,920
; PRIOR FILING DATE: 1999-05-21
; NUMBER OF SEQ ID NOS: 67
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 53
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-999-745-53

Query Match 95.8%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||
DB 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||

RESULT 3
US-09-554-000-37
; Sequence 37, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
; APPLICANT: Tsien, Roger Y.
; APPLICANT: Miyawaki, Atsushi
; TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
; FILE REFERENCE: 07257/042001
; CURRENT APPLICATION NUMBER: US/09/554,000
; PRIOR FILING DATE: 2000-04-20
; PRIOR APPLICATION NUMBER: 08/818,252
; PRIOR FILING DATE: 1997-03-14
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 37
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-554-000-37

Query Match 95.8%; Score 138; DB 3; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||
DB 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||

RESULT 4
US-10-090-109A-1
; Sequence 1, Application US/10090109A
; Publication No. US20020151458A1
; GENERAL INFORMATION:
; APPLICANT: Perez Gomariz, et al
; TITLE OF INVENTION: Method For Treating and Preventing Septic Shock With
; FILE REFERENCE: G80-016 ClP
; CURRENT APPLICATION NUMBER: US/10/090,109A
; PRIOR FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 09/446,352
; PRIOR FILING DATE: 2000-12-17
; NUMBER OF SEQ ID NOS: 3
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: unknown
; FEATURE:
; OTHER INFORMATION: Isolated from small intestines and brains of pigs
US-10-090-109A-1

Query Match 95.8%; Score 138; DB 4; Length 28;

Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||
DB 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||

RESULT 5
US-10-044-722-8
; Sequence 8, Application US/10044722
; Publication No. US20020182729A1
; GENERAL INFORMATION:
; APPLICANT: DiCICCO-BLOOM, Emanuel
; APPLICANT: NICOT, Arnaud
; APPLICANT: LU, Nairu
; APPLICANT: SUH, Junghyup
; TITLE OF INVENTION: Pituitary adenylate cyclase-activating polypeptide (PACAP) is an
; FILE REFERENCE: 270/175
; CURRENT APPLICATION NUMBER: US/10/044,722
; CURRENT FILING DATE: 2002-01-11
; NUMBER OF SEQ ID NOS: 8
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-722-8

Query Match 95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||
DB 1 HSDAVFTDNYTLRKQMRVKYKYLNSILN 28
|||||

RESULT 6
US-10-004-530A-17
; Sequence 17, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/004,530A
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; PRIOR APPLICATION NUMBER: 07/248,771
; PRIOR FILING DATE: 1988-09-23
; Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26

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RESULT 8
US-10-211-994-1
; Sequence 1, Application US/10211994
; Publication No. US20030082201A1
; GENERAL INFORMATION:
; APPLICANT: Rao, M.R.S.
; APPLICANT: Sengupta, Paromita
; APPLICANT: Praasad, Sudhanand
; APPLICANT: Burman, Anand C.
; APPLICANT: Mukherjee, Rama
; APPLICANT: Thomas, Becky
; TITLE OF INVENTION: MULTIVALENT SYNTHETIC VACCINE FOR CANCER
; FILE REFERENCE: U014152-1
; CURRENT APPLICATION NUMBER: US/10/211,994
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/309,975
; PRIOR FILING DATE: 2001-08-03
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT

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1  ; ADVERTISEMENT NO: US-10-100-256B-1
2  ; GENERAL INFORMATION:
3  ; APPLICANT: Thakur, Madhukar
4  ; TITLE OF INVENTION: RADIO-LABELLED VASOACTIVE INTESTINAL
5  ; TITLE OF INVENTION: PEPTIDE ANALOGS FOR IMAGING AND THERAPY
6  ; FILE REFERENCE: 8321-104-D11
7  ; CURRENT APPLICATION NUMBER: US/10/100,256B
8  ; CURRENT FILING DATE: 2002-03-15
9  ; PRIOR APPLICATION NUMBER: US 09/333,842
10 ; PRIOR FILING DATE: 1999-06-15
11 ; PRIOR APPLICATION NUMBER: US 60/089,364
12 ; PRIOR FILING DATE: 1998-06-15
13 ; NUMBER OF SEQ ID NOS: 3
14 ; SOFTWARE: FastSeq for Windows Version 4.0
15 ; SEQ ID NO 1
16 ; LENGTH: 28
17 ; TYPE: PRT
18 ; ORGANISM: Artificial Sequence
19 ; FEATURE:
20 ; OTHER INFORMATION: Synthetic Peptide
21 ; US-10-100-256B-1

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Query Match          95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 11
US-10-254-569A-1
; Sequence 1, Application US/10254569A
; Publication No. US20030158110A1
; GENERAL INFORMATION:
; APPLICANT: BURMAN C, ANAND
; APPLICANT: PRASAD, SUDHANAND
; APPLICANT: MUKHERJEE, RAMA
; APPLICANT: SINGH T, ANU
; APPLICANT: MATHUR, ARCHNA
; APPLICANT: GUPTA, NEENA
; TITLE OF INVENTION: VASOACTIVE INTESTINAL PEPTIDES ANALOGS
; FILE REFERENCE: 014071-1
; CURRENT APPLICATION NUMBER: US/10/254,569A
; CURRENT FILING DATE: 2002-12-05
; PRIOR APPLICATION NUMBER: 136/DEL/2000
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/630,335
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Sus barbatus
US-10-254-569A-1

Query Match          95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 12
US-10-201-288-31
; Sequence 31, Application US/10201288
; Publication No. US20030203373A1
; GENERAL INFORMATION:
; APPLICANT: SCHLEUNING, Wolf-Dieter
; APPLICANT: SCHULZ, Torsten
; TITLE OF INVENTION: METHOD FOR IDENTIFYING A PHARMACOLOGICALLY ACTIVE SUBSTANCE
; FILE REFERENCE: Q71278
; CURRENT APPLICATION NUMBER: US/10/201,288
; CURRENT FILING DATE: 2002-10-23
; PRIOR APPLICATION NUMBER: DE 102 08 178.5
; PRIOR FILING DATE: 2002-02-20
; NUMBER OF SEQ ID NOS: 32
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 31
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Human
US-10-201-288-31

Query Match          95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
|||||
```

```
Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 13
US-10-343-654-22
; Sequence 22, Application US/10343654
; Publication No. US20030204063A1
; GENERAL INFORMATION:
; APPLICANT: Denis Gravel (Inventor)
; APPLICANT: Abdelkrim Habi (Inventor)
; APPLICANT: Thierry Abribat (Inventor)
; APPLICANT: Theratechnologies Inc. (Assignee)
; TITLE OF INVENTION: Modified Biological Peptides with
; TITLE OF INVENTION: Increased Potency
; FILE REFERENCE: 12411-22PCT
; CURRENT APPLICATION NUMBER: US/10/343,654
; CURRENT FILING DATE: 2003-02-03
; NUMBER OF SEQ ID NOS: 50
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
; LENGTH: 28
; TYPE: PRT
; ORGANISM: human
; FEATURE:
; NAME/KEY: AMIDATION
; LOCATION: (28)...(28)
US-10-343-654-22

Query Match          95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 14
US-10-416-822-1
; Sequence 1, Application US/10416822
; Publication No. US200400631A1
; GENERAL INFORMATION:
; APPLICANT: Mondobiotec SA
; TITLE OF INVENTION: Use of biologically active peptides for the treatment of pulmonary
; FILE REFERENCE: arteriolar hypertension and related diseases
; CURRENT APPLICATION NUMBER: US/10/416,822
; CURRENT FILING DATE: 2003-05-13
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-416-822-1

Query Match          95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRLKQMRVKKYLNSILN 28

RESULT 15
US-10-467-059-14
; Sequence 14, Application US/10467059
; Publication No. US20040132648A1
; GENERAL INFORMATION:
; APPLICANT: ONOUE, SATOMI
; APPLICANT: KASHIMOTO, KAZUHIISA
; TITLE OF INVENTION: THERAPEUTIC AND/OR PROPHYLACTIC AGENT AGAINST CONFORMATIONAL DISE
```

; FILE REFERENCE: 241706USOPCT
; CURRENT APPLICATION NUMBER: US/10/467,059
; CURRENT FILING DATE: 2004-01-26
; PRIOR APPLICATION NUMBER: PCT/JP02/13311
; PRIOR FILING DATE: 2002-12-19
; PRIOR APPLICATION NUMBER: JP 2001-386699
; PRIOR FILING DATE: 2001-12-19
; NUMBER OF SEQ ID NOS: 49
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 14
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Peptide
US-10-467-059-14

Query Match 95.8%; Score 138; DB 4; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.6e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||
Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28
|||||

Search completed: January 25, 2006, 15:31:04
Job time : 53.625 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 15:08:34 ; Search time 3.5 Seconds
(without alignments)
86.633 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNYTRLRQMKVKKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 75621 seqs, 10829074 residues

Total number of hits satisfying chosen parameters: 75621

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA New:*

- 1: /cgn2_6/ptodata/2/pubaa/US08_NEW_PUB.pep.*
- 2: /cgn2_6/ptodata/2/pubaa/US06_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubaa/US07_NEW_PUB.pep.*
- 4: /cgn2_6/ptodata/2/pubaa/PCT_NEW_PUB.pep.*
- 5: /cgn2_6/ptodata/2/pubaa/US09_NEW_PUB.pep.*
- 6: /cgn2_6/ptodata/2/pubaa/US10_NEW_PUB.pep.*
- 7: /cgn2_6/ptodata/2/pubaa/US11_NEW_PUB.pep.*
- 8: /cgn2_6/ptodata/2/pubaa/US60_NEW_PUB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	138	95.8	28	7	US-11-175-690-352
2	138	95.8	28	7	US-11-175-690-353
3	138	95.8	637	7	US-11-175-690-265
4	138	95.8	637	7	US-11-175-690-266
5	102	70.8	636	7	US-11-175-690-240
6	101	70.1	27	7	US-11-175-690-326
7	101	70.1	27	7	US-11-175-690-327
8	101	70.1	38	7	US-11-175-690-328
9	101	70.1	38	7	US-11-175-690-329
10	101	70.1	636	7	US-11-175-690-239
11	101	70.1	647	7	US-11-175-690-241
12	101	70.1	647	7	US-11-175-690-242
13	73	50.7	636	7	US-11-175-690-278
14	72	50.0	27	7	US-11-175-690-364
15	72	50.0	27	7	US-11-175-690-365
16	72	50.0	636	7	US-11-175-690-277
17	62	43.1	30	7	US-11-112-277-30
18	58	40.3	30	7	US-11-112-277-2
19	57	39.6	30	7	US-11-112-277-29
20	57	39.6	49	6	US-10-997-081A-26
21	57	39.6	49	6	US-10-997-081A-27
22	57	39.6	49	6	US-10-997-081A-28
23	57	39.6	49	6	US-10-997-081A-29
24	57	39.6	49	6	US-10-997-081A-30
25	57	39.6	49	6	US-10-997-081A-31

Sequence 32, Appl
Sequence 35, Appl
Sequence 25, Appl
Sequence 11, Appl
Sequence 18, Appl
Sequence 19, Appl
Sequence 20, Appl
Sequence 21, Appl
Sequence 22, Appl
Sequence 23, Appl
Sequence 40, Appl
Sequence 41, Appl
Sequence 10, Appl
Sequence 354, App
Sequence 355, App
Sequence 31, Appl
Sequence 267, App
Sequence 8, Appl
Sequence 8, Appl

ALIGNMENTS

RESULT 1

US-11-175-690-352
; Sequence 352, Application US/11175690
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 352
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-352

Query Match 95.8%; Score 138; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.1e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRQMKVKKYLSILN 28
|||||
Db 1 HSDAVFTDNYTRLRQMKVKKYLSILN 28

RESULT 2

US-11-175-690-353
; Sequence 353, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:

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; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 353
; LENGTH: 28
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-353

Query Match          95.8%; Score 138; DB 7; Length 28;
Best Local Similarity 96.4%; Pred. No. 1,1e-14;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||
Db 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||

RESULT 3
US-11-175-690-265
; Sequence 265, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 265
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-265

Query Match          95.8%; Score 138; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 1,1e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||
Db 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266

Query Match          95.8%; Score 138; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 3.9e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||
Db 25 HSDAVFTDNYTLRKQMRVKYKLSILN 52
    |||||

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
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Best Local Similarity 96.4%; Pred. No. 3.9e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||
Db 610 HSDAVFTDNYTLRKQMRVKYKLSILN 637
    |||||

RESULT 4
US-11-175-690-266
; Sequence 266, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 266
; LENGTH: 637
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-266

Query Match          95.8%; Score 138; DB 7; Length 637;
Best Local Similarity 96.4%; Pred. No. 3.9e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
    |||||
Db 25 HSDAVFTDNYTLRKQMRVKYKLSILN 52
    |||||

RESULT 5
US-11-175-690-240
; Sequence 240, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
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; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 240
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-240

Query Match 70.8%; Score 102; DB 7; Length 636;
Best Local Similarity 64.3%; Pred. No. 8.7e-08;
Matches 18; Conservative 6; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 28
|||:||||:||||:||||:||||:|:
Db 25 HSDGIFTDSYRKRQMAVKKYLAAVL 52

RESULT 6
US-11-175-690-326
; Sequence 326, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 326
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-326

Query Match 70.1%; Score 101; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 3.4e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27
|||:||||:||||:||||:||||:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 7
US-11-175-690-327
; Sequence 327, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690

; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 327
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-327

Query Match 70.1%; Score 101; DB 7; Length 27;
Best Local Similarity 66.7%; Pred. No. 3.4e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27
|||:||||:||||:||||:||||:|:
Db 1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 8
US-11-175-690-328
; Sequence 328, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 328
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-328

Query Match 70.1%; Score 101; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 5e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27

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Db      1 HSDGFTDSYRKRQMAVKKYLAAVL 27
      ||| :|||:|:| ||| ||| ||| :|
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 239
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-239

Query Match      70.1%; Score 101; DB 7; Length 636;
Best Local Similarity 66.7%; Pred. No. 1.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNTYRLRKQMKVKKYLSIL 27
      ||| :|||:|:| ||| ||| ||| :|
Db      610 HSDGIFTDSYRKRQMAVKKYLAAVL 636

RESULT 9
US-11-175-690-329
; Sequence 329, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 329
; LENGTH: 38
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-329

Query Match      70.1%; Score 101; DB 7; Length 38;
Best Local Similarity 66.7%; Pred. No. 5e-09;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNTYRLRKQMKVKKYLSIL 27
      ||| :|||:|:| ||| ||| ||| :|
Db      1 HSDGIFTDSYRKRQMAVKKYLAAVL 27

RESULT 10
US-11-175-690-239
; Sequence 239, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30

US-11-175-690-241
; Sequence 241, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 241
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-241

Query Match      70.1%; Score 101; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 1.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy      1 HSDAVFTDNTYRLRKQMKVKKYLSIL 27
      ||| :|||:|:| ||| ||| ||| :|
Db      610 HSDGIFTDSYRKRQMAVKKYLAAVL 636

RESULT 12
US-11-175-690-242
; Sequence 242, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
```

; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 242
; LENGTH: 647
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-242

Query Match 70.1%; Score 101; DB 7; Length 647;
Best Local Similarity 66.7%; Pred. No. 1.2e-07;
Matches 18; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSIL 27
|||:||||:|||||:|
Db 25 HSDGIFTDSYRKQMAVKKYLAAVL 51

RESULT 13
US-11-175-690-278
; Sequence 278, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 278
; LENGTH: 636
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-278

Query Match 50.7%; Score 73; DB 7; Length 636;
Best Local Similarity 42.9%; Pred. No. 0.0018;
Matches 12; Conservative 9; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
|||:||||:|||||:|
Db 25 HADGVFTSDFSKLGLQLSAKKYLESLM 52

RESULT 14
US-11-175-690-364
; Sequence 364, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 364
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-364

Query Match 50.0%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 6.9e-05;
Matches 12; Conservative 8; Mismatches 7; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSIL 27
|||:||||:|||||:|
Db 1 HADGVFTSDFSKLGLQLSAKKYLESLM 27

RESULT 15
US-11-175-690-365
; Sequence 365, Application US/11175690
; Publication No. US20060014254A1
; GENERAL INFORMATION:
; APPLICANT: Haseltine et al.
; TITLE OF INVENTION: Albumin Fusion Proteins
; FILE REFERENCE: PF605
; CURRENT APPLICATION NUMBER: US/11/175,690
; CURRENT FILING DATE: 2005-07-07
; PRIOR APPLICATION NUMBER: PCT/US04/001369
; PRIOR FILING DATE: 2004-01-20
; PRIOR APPLICATION NUMBER: US 60/441,305
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: US 60/453,201
; PRIOR FILING DATE: 2003-03-11
; PRIOR APPLICATION NUMBER: US 60/467,222
; PRIOR FILING DATE: 2003-05-02
; PRIOR APPLICATION NUMBER: US 60/472,816
; PRIOR FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: US 60/476,267
; PRIOR FILING DATE: 2003-06-06
; PRIOR APPLICATION NUMBER: US 60/505,172
; PRIOR FILING DATE: 2003-09-24
; PRIOR APPLICATION NUMBER: US 60/506,746
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 568
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 365
; LENGTH: 27

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; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-175-690-365

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Query Match 50.0%; Score 72; DB 7; Length 27;
Best Local Similarity 44.4%; Pred. No. 6.9e-05;
Matches 12; Conservative 8; Mismatches 7; Indels

Qy 1 HSDAVFTDNYTRLRKQMRVKKYLNSIL 27
| | | | | : : : | | : | | | : :
Db 1 HADGVFTSDFSKLLGQLSAKKYLESLM 27

Search completed: January 25, 2006, 15:31:43
Job time : 3.5 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:55:03 ; Search time 13.25 Seconds
(without alignments)
203.326 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80.*

1: pir1.*

2: pir2.*

3: pir3.*

4: pir4.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	138	95.8	28	B60071	vasoactive intesti
2	138	95.8	28	A60304	vasoactive intesti
3	138	95.8	55	VRBO	vasoactive intesti
4	138	95.8	55	VRRB	vasoactive intesti
5	138	95.8	55	VRSH	vasoactive intesti
6	138	95.8	58	VRPG	vasoactive intesti
7	138	95.8	145	A60038	vasoactive intesti
8	138	95.8	170	VRHU	vasoactive intesti
9	138	95.8	170	VRRT	vasoactive intesti
10	138	95.8	170	A60037	vasoactive intesti
11	125	86.8	55	VRGP	vasoactive intesti
12	123	85.4	165	VRCH	vasoactive intesti
13	122	84.7	28	A60303	vasoactive intesti
14	115	79.9	28	A38232	vasoactive intesti
15	112	77.8	25	JQ0361	vasoactive intesti
16	101	70.1	27	A61071	pituitary adenylat
17	101	70.1	38	A49165	pituitary adenylat
18	101	70.1	173	S34767	neuropeptides prec
19	101	70.1	175	A37786	pituitary adenylat
20	101	70.1	176	I84638	pituitary adenylat
21	101	70.1	176	A34044	pituitary adenylat
22	101	70.1	195	I50456	pituitary adenylat
23	95	66.0	38	A61070	pituitary adenylat
24	77	53.5	35	HWGHD	exendin-2 - Gila m
25	74	51.4	38	HWGHS	exendin-1 - Mexica
26	71	49.3	104	A32731	somatoliberin prec
27	70	48.6	103	A41410	somatoliberin prec
28	65	45.1	27	SECH	secretin - chicken
29	62	43.1	44	RHBS	somatoliberin - bo

30	59	41.0	443	2	C70392	gamma-glutamyl pho
31	58	40.3	27	2	A27267	secretin - dog
32	57	39.6	44	1	RHPG	somatoliberin - pi
33	57	39.6	108	1	RHHUS	somatoliberin prec
34	56	38.9	27	1	S07443	secretin - human
35	56	38.9	27	1	SEBO	secretin - bovine
36	56	38.9	27	1	SESH	secretin - sheep
37	56	38.9	131	1	SEPG	secretin precursor
38	54	37.5	27	2	C60415	secretin - rabbit
39	53	36.8	31	2	S44471	glucagon G1 - Nort
40	53	36.8	133	2	JC2202	glucagon G1 - Nort
41	53	36.8	168	2	F90095	secretin precursor
42	53	36.8	532	2	B82354	hypothetical prote
43	52	36.1	29	1	GCDF	deoxycytidylate de
44	52	36.1	134	2	A40959	glucagon - smaller
45	52	36.1	180	1	GCGP	secretin precursor
						glucagon precursor

ALIGNMENTS

RESULT 1

B60071

vasoactive intestinal peptide - rhesus macaque

C:Species: Macaca mulatta (rhesus macaque)

C:Date: 28-Apr-1993 #sequence_revision 28-Apr-1993 #text_change 20-Mar-1998

C:Accession: B60071

R:Yu, J.; Xin, Y.; Eng, J.; Yalow, R.S.

Regul. Pept. 32, 39-45, 1991

A:Title: Rhesus monkey gastroenteropancreatic hormones: relationship to human sequences

A:Reference number: A60071; MUID:91164506; PMID:2003150

A:Accession: B60071

A>Status: protein sequence not shown

A:Molecule type: protein

A:Residues: 1-28 <YUA>

A:Cross-references: UNIPARC:UPI000002D1C0

A:Note: the sequence is identical with the human sequence

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

Db 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

RESULT 2

A60304

vasoactive intestinal peptide - dog

N:Alternate names: VIP

C:Species: Canis lupus familiaris (dog)

C:Date: 15-Jan-1993 #sequence_revision 15-Jan-1993 #text_change 09-Jul-2004

C:Accession: A60304

R:Eng, J.; Pan, Y.C.E.; Raufman, J.P.; Yalow, R.S.

Regul. Pept. Suppl. 3, S14, 1985

A:Title: Purification and sequencing of dog and guinea pig VIP's.

A:Reference number: A60304

A:Accession: A60304

A:Molecule type: protein

A:Residues: 1-28 <ENG>

A:Cross-references: UNIPROT:P04565; UNIPARC:UPI000002D1C0

C:Superfamily: glucagon

C:Keywords: duplication; hormone; intestine; neuropeptide; vasodilator

Query Match 95.8%; Score 138; DB 2; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.7e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

Db 1 HSDAVFTDNTYRLRKQMRVKYLSILN 28

Db 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

RESULT 3

VRBO

vasoactive intestinal peptide precursor - bovine (fragments)
 N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C:Species: Bos primigenius taurus (cattle)
 C>Date: 26-Apr-1996 #sequence_revision 03-May-1996 #text_change 07-May-1999
 C:Accession: A61643; A61644; S09689
 R:Carlquist, M.; Kaiser, R.; Tatemoto, K.; Joernvall, H.; Mutt, V.
 Eur. J. Biochem. 144, 243-247, 1984
 A:Title: A novel form of the polypeptide PHI isolated in high yield from bovine upper in
 A:Reference number: A61643; MUID:85027215; PMID:654846
 A:Accession: A61643
 A:Molecule type: protein
 A:Residues: 1-27 <CAR>
 A:Cross-references: UNIPARC:UPI0000173515
 R:Carlquist, M.; Mutt, V.; Joernvall, H.
 FEBS Lett. 108, 457-460, 1979
 A:Title: Isolation and characterization of bovine vasoactive intestinal peptide (VIP).
 A:Reference number: A61644; MUID:80092152; PMID:520589
 A:Accession: A61644
 A:Molecule type: protein
 A:Residues: 28-55 <CA2>
 A:Cross-references: UNIPARC:UPI000002D1C0
 R:Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
 Blochim. Biophys. Acta 1038, 355-359, 1990
 A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A:Reference number: S09688; MUID:90254163; PMID:2340294
 A:Contents: annotation; comparison of mammalian PHI sequences
 C:Superfamily: glucagon
 C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F:1-27/Product: peptide histidine-isoleucine #status experimental <P27>
 F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 138; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 3.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 4

VRBB

vasoactive intestinal peptide precursor - rabbit (fragments)
 N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C:Species: Oryctolagus cuniculus (domestic rabbit)
 C>Date: 03-Feb-1993 #sequence_revision 19-Apr-1996 #text_change 20-Mar-1998
 C:Accession: B60415; A60415
 R:Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.; Robberecht,
 Peptides 11, 123-128, 1990
 A:Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.
 A:Reference number: A60415; MUID:90259845; PMID:2342988
 A:Accession: B60415
 A:Molecule type: protein
 A:Residues: 1-27 <GOS>
 A:Cross-references: UNIPARC:UPI00000351DB
 A:Accession: A60415
 A:Molecule type: protein
 A:Residues: 28-55 <G02>
 A:Cross-references: UNIPARC:UPI00000351DB

C:Superfamily: glucagon
 C:Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi
 F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 138; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 3.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 5

VRSH

vasoactive intestinal peptide precursor - sheep (fragments)
 N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C>Date: 31-Mar-1993 #sequence_revision 19-Apr-1996 #text_change 09-Jul-2004
 C:Accession: B60072; A60072; C61063; A43974
 R:Boujoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
 Regul. Pept. 32, 169-179, 1991
 A:Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
 A:Reference number: A60072; MUID:91239834; PMID:2034821
 A:Accession: B60072
 A:Molecule type: protein
 A:Residues: 1-27 <BOU>
 A:Cross-references: UNIPROT:P04565; UNIPARC:UPI0000173515
 A:Accession: A60072
 A:Molecule type: protein
 A:Residues: 28-55 <BO2>
 A:Cross-references: UNIPARC:UPI000002D1C0
 R:Miyata, A.; Jiang, L.; Stibbs, H.H.; Arimura, A.
 Regul. Pept. 38, 145-154, 1992
 A:Title: Chemical characterization of vasoactive intestinal polypeptide-like immunoreact
 A:Reference number: A61063; MUID:92245116; PMID:1574609
 A:Accession: C61063
 A:Molecule type: protein
 A:Residues: 28-55 <MIY>
 A:Cross-references: UNIPARC:UPI000002D1C0
 A:Experimental source: hypothalamus, intestine
 R:Garvelin, G.

Peptides 11, 703-706, 1990
 A:Title: Isolation and primary structure of VIP from sheep brain.
 A:Reference number: A43974; MUID:91045331; PMID:2235680
 A:Accession: A43974

A:Molecule type: protein
 A:Residues: 28-55 <GAF>
 A:Cross-references: UNIPARC:UPI000002D1C0
 A:Experimental source: brain

C:Superfamily: glucagon
 C:Keywords: amidated carboxyl end; brain; duplication; hormone; intestine; neuropeptide;
 F:1-27/Product: peptide histidine-isoleucine #status experimental <PHI>
 F:28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
 F:27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
 F:55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 95.8%; Score 138; DB 1; Length 55;
 Best Local Similarity 96.4%; Pred. No. 3.4e-13;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 28 HSDAVFTDNYTLRKQMAVKKYLNSILN 55

RESULT 6

VRPG

vasoactive intestinal peptide precursor - pig (fragments)
 N:Contains: peptide histidine-isoleucine (PHI-27); vasoactive intestinal peptide (VIP)
 C:Species: Sus scrofa domestica (domestic pig)
 C>Date: 24-Apr-1994 #sequence_revision 05-Jan-1996 #text_change 09-Jul-2004
 C:Accession: A01549; A60300; A01550; JT0417; A56754; S09690
 R:Tatemoto, K.; Mutt, V.
 Proc. Natl. Acad. Sci. U.S.A. 78, 6603-6607, 1981
 A:Title: Isolation and characterization of the intestinal peptide porcine PHI (PHI-27),
 A:Reference number: A01549; MUID:82082498; PMID:6947244

A;Accession: A01549
A;Molecule type: protein
A;Residues: 1-27 <TA>
A;Cross-references: UNIPROT:P01284; UNIPARC:UPI00000351DB
R;Tatemoto, K.
Regul. Pept. 6, 330, 1983
A;Title: PHI - a new brain-gut peptide.
A;Reference number: A60300
A;Accession: A60300
A;Molecule type: protein
A;Residues: 1-27 <TA2>
A;Cross-references: UNIPARC:UPI00000351DB
R;Mutt, V.; Said, S.I.
Eur. J. Biochem. 42, 581-589, 1974
A;Title: Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid
A;Reference number: A01550; MUID:74167323; PMID:4829446
A;Accession: A01550
A;Molecule type: protein
A;Residues: 28-55 <MUT>
A;Cross-references: UNIPARC:UPI000002D1C0
R;Gafvelin, G.; Andersson, M.; Dimaline, R.; Joernvall, H.; Mutt, V.
Peptides 9, 469-474, 1988
A;Title: Isolation and characterization of a variant form of vasoactive intestinal poly
A;Reference number: J70417; MUID:88335763; PMID:2843830
A;Accession: J70417
A;Molecule type: protein
A;Residues: 28-58 <GAP>
A;Cross-references: UNIPARC:UPI000002B99A
A;Note: this extended form is active in a VIP assay but is probably an incompletely proc
R;Bodanszky, M.; Klausner, Y.S.; Lin, C.Y.; Mutt, V.; Said, S.I.
J. Am. Chem. Soc. 96, 4973-4978, 1974
A;Reference number: A26231; MUID:74308014; PMID:4854585
A;Contents: annotation
A;Note: a 28-residue peptide having the sequence and biological activities (in two assay
R;Ichiki, Y.; Kitamura, K.; Kangawa, K.; Kawamoto, M.; Matsuo, H.; Eto, T.
Biochem. Biophys. Res. Commun. 187, 1587-1593, 1992
A;Title: Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI)
A;Reference number: A56754; MUID:93038640; PMID:1329741
A;Accession: A56754
A;Molecule type: protein
A;Residues: 1-24 <ICH>
A;Cross-references: UNIPARC:UPI00000173514
A;Experimental source: duodenum
A;Note: sequence extracted from NCBI backbone (NCBI:P114219)
R;Buscall, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht,
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Contents: annotation
C;Comment: The biological source of vasoactive intestinal peptide is the duodenal mucosa
of myocardial contractility, stimulation of exocrine pancreatic secretion (in a secretin
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; neuropeptide
F;1-27/Product: peptide histidine-isoleucine #status experimental <P27>
F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>
F;27/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental
F;55/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gly

Query Match 95.8%; Score 138; DB 1; Length 58;
Best Local Similarity 96.4%; Pred. No. 3.6e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTDNYTRLRQKQMRVKYKLYNSILN 28
Db 28 HSDAVFTDNYTRLRQKQMRVKYKLYNSILN 55

RESULT 7
A60038
vasoactive intestinal peptide precursor - crab-eating macaque (fragment)
C;Species: Macaca fascicularis (crab-eating macaque)
C;Date: 03-Mar-1993 #sequence_revision 03-Mar-1993 #text_change 09-Jul-2004
C;Accession: A60038

R;Benson, D.L.; Isackson, P.J.; Jones, E.G.
Brain Res. Mol. Brain Res. 9, 169-174, 1991
A;Title: In situ hybridization reveals VIP precursor mRNA-containing neurons in monkey a
A;Reference number: A60038; MUID:91203476; PMID:1850073
A;Accession: A60038
A;Status: not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-145 <BEN>
A;Cross-references: UNIPROT:Q7M2Y9; UNIPARC:UPI0000017662C
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; neuropeptide; vasodi

Query Match 95.8%; Score 138; DB 2; Length 145;
Best Local Similarity 96.4%; Pred. No. 9.4e-13;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Oy 1 HSDAVFTDNYTRLRQKQMRVKYKLYNSILN 28
Db 100 HSDAVFTDNYTRLRQKQMRVKYKLYNSILN 127

RESULT 8
VRHU
vasoactive intestinal peptide precursor [validated] - human
N;Alternate names: VIP precursor
N;Contains: peptide histidine-methionine (PHM-27); peptide histidine-valine (PHV-42); va
C;Species: Homo sapiens (man)
C;Date: 14-Nov-1983 #sequence_revision 14-Nov-1983 #text_change 09-Jul-2004
C;Accession: A23296; A93313; A60205; A26361; A27419; JH0618; I51955; I56494; I56988; A01
R;Tsukada, T.; Horovitch, S.J.; Montminy, M.R.; Mandel, G.; Goodman, R.H.
DNA 4, 293-300, 1985
A;Title: Structure of the human vasoactive intestinal polypeptide gene.
A;Reference number: A90952; MUID:86004065; PMID:3899557
A;Accession: A23296
A;Molecule type: DNA
A;Residues: 1-170 <TSU>
A;Cross-references: UNIPROT:P01282; UNIPARC:UPI000003B343; GB:M11553; NID:9340243; PIDN:
A;Note: the authors translated the codon GAA for residue 48 as Gln
R;Itoh, N.; Obata, K.; Yanaihara, N.; Okamoto, H.
Nature 304, 547-549, 1983
A;Title: Human preprovasoactive intestinal polypeptide contains a novel PHI-27-like pept
A;Reference number: A93313; MUID:83271523; PMID:6571696
A;Accession: A93313
A;Molecule type: mRNA
A;Residues: 1-170 <ITO>
A;Cross-references: UNIPARC:UPI000003B343; GB:L00157; GB:J00320; NID:9340277; PIDN:AAA61
R;Gozes, I.; Giladi, E.; Shani, Y.
J. Neurochem. 48, 1136-1141, 1987
A;Title: Vasoactive intestinal peptide gene: putative mechanism of information storage a
A;Reference number: A60205; MUID:87140054; PMID:2434617
A;Accession: A60205
A;Molecule type: mRNA
A;Residues: 78-155 <GOZ>
A;Cross-references: UNIPARC:UPI000016B2F8; GB:M31645; GB:M32162; NID:9340250; PIDN:AAA61
A;Note: this abundant mRNA from a human buccal tumor line contains an unspliced intron
R;Jinder, S.; Barkhem, T.; Norberg, A.; Persson, H.; Schalling, M.; Hokfelt, T.; Magnus
Proc. Natl. Acad. Sci. U.S.A. 84, 605-609, 1987
A;Title: Structure and expression of the gene encoding the vasoactive intestinal peptide
A;Reference number: A26361; MUID:87092456; PMID:3025882
A;Accession: A26361
A;Molecule type: DNA
A;Residues: 1-115, 'L', 117-135, 'G', 137-170 <LIN>
A;Cross-references: UNIPARC:UPI000016B2FA; GB:M14623; NID:9340271; PIDN:AAA61288.1; PID:
A;Note: the authors translated the codon TTA for residue 116 as Ser and GGC for residue
R;Yiangou, Y.; Di Marzo, V.; Spokes, R.A.; Panico, M.; Morris, H.R.; Bloom, S.R.
J. Biol. Chem. 262, 14010-14013, 1987
A;Title: Isolation, characterization, and pharmacological actions of peptide histidine v
A;Reference number: A27419; MUID:88007645; PMID:3654650
A;Accession: A27419
A;Molecule type: protein
A;Residues: 81-122 <YIA>
A;Cross-references: UNIPARC:UPI00000351DE
R;Kitamura, K.; Kangawa, K.; Kawamoto, M.; Ichiki, Y.; Matsuo, H.; Eto, T.

Biochem. Biophys. Res. Commun. 185, 134-141, 1992

A>Title: Isolation and characterization of peptides which act on rat platelets, from a p

A/Reference number: JH0618; MUID:92287083; PMID:1318039

A/Accession: JH0618

A/Molecule type: protein

A/Residues: 125-152 <KIT>

A/Cross-references: UNIPARC:UPI000002D1C0

A/Experimental source: pheochromocytoma

R/famagami, T.; Ohawa, K.; Nishizawa, M.; Inoue, C.; Gotoh, E.; Yanaihara, N.; Yamamoto

Ann. N. Y. Acad. Sci. 527, 87-102, 1988

A>Title: Complete nucleotide sequence of human vasoactive intestinal peptide/PHM-27 gene

A/Reference number: I51955; MUID:88267775; PMID:2839091

A/Accession: I51955

A>Status: translated from GB/EMBL/DBJ

A/Molecule type: DNA

A/Residues: 1-170 <RES>

A/Cross-references: UNIPARC:UPI000003B343; GB:M33027; NID:g340253; PIDN:AAA69515.1; PID:

R/Gozes, I.; Giladi, E.; Shani, Y.

J. Neurochem. 47, 1136-1141, 1987

A>Title: Vasoactive intestinal peptide gene: Putative mechanism of information storage a

A/Reference number: I56494

A/Accession: I56494

A>Status: preliminary; translated from GB/EMBL/DBJ

A/Molecule type: DNA

A/Residues: 78-155 <RES2>

A/Cross-references: UNIPARC:UPI000016B2F8; GB:M32162; NID:g340250; PIDN:AAA61285.1; PID:

R/Bloom, S.R.; Christofides, N.D.; Delamarter, J.; Buell, G.; Kawashima, E.; Polak, J.M.

Lancet 2, 1163-1165, 1983

A>Title: Diarrhoea in vipoma patients associated with cosecretion of a second active pep

A/Reference number: I56988; MUID:84066682; PMID:6139527

A/Accession: I56988

A>Status: preliminary; translated from GB/EMBL/DBJ

A/Molecule type: mRNA

A/Residues: 50-170 <RES3>

A/Cross-references: UNIPARC:UPI000016B2F7; GB:M54930; NID:g340247; PIDN:AAA63268.1; PID:

C/Genetics:

A/Gene: GDB:VIP

A/Cross-references: GDB:120490; OMIM:192320

A/Map position: 6q26-q27

A/Introns: 36/2; 77/2; 112/2; 156/2

C/Superfamily: glucagon

C/Keywords: amidated carboxyl end; duplication; glycoprotein; hormone; intestine; neurop

F/81-20/Domain: signal sequence #status predicted <SIG>

F/81-122/Product: peptide histidine-valine (PHV-42) #status experimental <PHV>

F/81-107/Product: peptide histidine-methionine (PHM-27) #status experimental <PHM>

F/125-152/Product: vasoactive intestinal peptide #status experimental <VIP>

F/168.133/Binding site: carboxylate (Asn) (covalent) #status predicted

F/107/Modified site: amidated carboxyl end (Met) (amide in mature form from following gl

F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 95.8%; Score 138; DB 1; Length 170;

Best Local Similarity 96.4%; Pred. No. 1.1e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

RESULT 9

VRT

N/Contains: intestinal peptide precursor - rat

N/Species: Rattus norvegicus (Norway rat)

C/Date: 28-Feb-1986 #sequence_revision 30-Jun-1993 #text_change 09-Jul-2004

C/Accession: A60053; B60037; A01548; A28102; A60586; A60587; S09691

R/Giladi, E.; Shani, Y.; Gozes, I.

Brain Res. Mol. Brain Res. 7, 261-267, 1990

A>Title: The complete structure of the rat VIP gene.

A/Reference number: A60053; MUID:90244869; PMID:2159586

A/Accession: A60053

A/Molecule type: DNA

A/Residues: 1-170 <GIL>

A/Cross-references: UNIPROT:P01283; UNIPARC:UPI000013884A

A/Note: the authors translated the codon GAG for residue 67 as Gin

R/Lamperti, E.D.; Rosen, K.M.; Villa-Komaroff, L.

Brain Res. Mol. Brain Res. 9, 217-231, 1991

A>Title: Characterization of the gene and messages for vasoactive intestinal polypeptide

A/Reference number: A60037; MUID:91232388; PMID:1851524

A/Accession: B60037

A>Status: not compared with conceptual translation

A/Molecule type: DNA

A/Residues: 78-155 <LAM>

A/Cross-references: UNIPARC:UPI00000173511

R/Nishizawa, M.; Hayakawa, Y.; Yanaihara, N.; Okamoto, H.

FEBS Lett. 183, 55-59, 1985

A>Title: Nucleotide sequence divergence and functional constraint in VIP precursor mRNA

A/Reference number: A01548; MUID:85154612; PMID:3838518

A/Accession: A01548

A/Molecule type: mRNA

A/Residues: 9-170 <NTS>

A/Cross-references: UNIPARC:UPI0000170BA3; GB:X02341; NID:g57481; PIDN:CAA26200.1; PID:g

A/Experimental source: cerebral cortex

R/Goetzl, E.J.; Sreedharan, S.P.; Turck, C.W.

J. Biol. Chem. 263, 9083-9086, 1988

A>Title: Structurally distinctive vasoactive intestinal peptides from rat basophilic leu

A/Reference number: A28102; MUID:98243784; PMID:3379062

A/Accession: A28102

A/Molecule type: protein

A/Residues: 134-152 <GOE>

A/Cross-references: UNIPARC:UPI00000351E4

A/Note: the source of this novel short form of VIP was rat basophilic leukemia cells

R/Cauvin, A.; Vandermeers, A.; Vandermeers-piret, M.C.; Rathe, J.; Robberecht, P.; Chris

Endocrinology 125, 1296-1302, 1989

A>Title: Peptide histidine isoleucineamide (PHI)-(1-27)-Gly as a new major form of PHI in

A/Reference number: A60586; MUID:89338237; PMID:2759027

A/Accession: A60586

A/Molecule type: protein

A/Residues: 81-108 <CAU>

A/Cross-references: UNIPARC:UPI0000173512

R/Cauvin, A.; Vandermeers, A.; Vandermeers-Piret, M.C.; Robberecht, P.; Christophe, J.

Endocrinology 125, 2645-2655, 1989

A>Title: Variable distribution of three molecular forms of peptide histidine isoleucineam

A/Reference number: A60587; MUID:90005222; PMID:2792003

A/Accession: A60587

A/Molecule type: protein

A/Residues: 81-122 <CA2>

A/Cross-references: UNIPARC:UPI0000173513

R/Buscail, L.; Cauvin, A.; Gourlet, P.; Gossens, D.; de Neef, P.; Rathe, J.; Robberecht,

Biochim. Biophys. Acta 1038, 355-359, 1990

A>Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide

A/Reference number: S09688; MUID:90254163; PMID:2340294

A/Contents: annotation; comparison of mammalian PHI sequences

C/Comment: Two active peptides are released from the VIP precursor by cleavage at paired

C/Genetics:

A/Introns: 36/2; 77/2; 156/2

C/Superfamily: glucagon

C/Keywords: amidated carboxyl end; cerebral cortex; duplication; glycoprotein; hormone;

F/81-122/Product: signal sequence #status predicted <SIG>

F/81-107/Product: PHI-42 #status experimental <PH42>

F/81-108/Product: peptide histidine-isoleucine (PHI-27) #status predicted <PHI>

F/125-152/Product: vasoactive intestinal peptide #status predicted <VIP>

F/107/Modified site: amidated carboxyl end (Ile) (amide in mature form from following gl

F/133/Binding site: carboxylate (Asn) (covalent) #status predicted

F/152/Modified site: amidated carboxyl end (Asn) (amide in mature form from following gl

Query Match 95.8%; Score 138; DB 1; Length 170;

Best Local Similarity 96.4%; Pred. No. 1.1e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMAVKKYLNSILN 28

Db 125 HSDAVFTDNYTLRKQMAVKKYLNSILN 152

C;Superfamily: glucagon

F;Keywords: amidated carboxyl end, duplication; hormone; intestine; neuropeptide; vasod

F;1-27/Product: peptide histidine-isoleucine #status experimental <p27>

F;28-55/Product: vasoactive intestinal peptide #status experimental <VIP>

F;217/Modified site: amidated carboxyl end (Ile) (in mature form) #status experimental

F;55/Modified site: amidated carboxyl end (Asn) (in mature form) #status experimental

Query Match 86.8%; Score 125; DB 1; Length 55;
Best Local Similarity 82.1%; Pred. No. 2.6e-11;
Matches 23; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKVYLNSIL 28
DB 28 HSDALFDTTYTLRKQMAWKVYLNSVLN 55
|||||:|||||||:|||||:|
|||||:|||||||:|||||:|

RESULT 12

VRCH

vasoactive intestinal peptide precursor - chicken

C;Species: Gallus gallus (Chicken)

C;Date: 24-Apr-1984 #sequence revision 10-Nov-1995 #text_change 09-Jul-2004

C;Accession: S47470; A91425; A90720; A01551

R;Talbot, R.T.; Dunn, I.C.; Wilson, P.W.; Sang, H.M.; Sharp, P.J.

submitted to the EMBL Data Library, August 1994

A;Description: Evidence for alternative splicing of the chicken VIP gene.

A;Reference number: S47470

A;Accession: S47470

A:Molecule type: mRNA

A;Residues: 1-165 <NAL>

A;Cross-references: UNIPROT:P48143; UNIPARC:UPI000002B6C3; EMBL:X80906; NID:G531364; PID

FEBS Lett. 60, 322-326, 1975

A;Title: Structure of the vasoactive intestinal octacosapeptide from chicken intestine.

A;Reference number: A91425; MUID:76210823; PMID:1227973

A;Accession: A91425

A:Molecule type: protein

A;Residues: 94-121 <Nfr>

A;Cross-references: UNIPARC:UPI0000035E1

R;Bodanszky, M.; Lin, C.Y.; Yiotakis, A.E.; Mutt, V.; Said, S.I.

Bioorg. Chem. 5, 339-350, 1976

A;Title: Vasoactive intestinal peptide (VIP) from chicken. Synthesis and properties of t

A;Reference number: A90720

A;Contents: synthesis

A;Accession: A90720

A:Molecule type: protein

A;Residues: 107-121 <BOD>

A;Cross-references: UNIPARC:UPI0000173517

C;Superfamily: glucagon

C;Keywords: amidated carboxyl end, duplication; hormone; neuropeptide

F;1-25/Domain: signal sequence #status predicted <SIG>

F;94-121/Product: vasoactive intestinal peptide #status experimental <MAT>

F;121/Modified site: amidated carboxyl end (Thr) (amide in mature form from following gl

Query Match 85.4%; Score 123; DB 1; Length 165;
Best Local Similarity 85.2%; Pred. No. 1.6e-10;
Matches 23; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMRVKVYLNSIL 27
DB 94 HSDAVFTDNYSRFRKQMAWKVYLNSVL 120
|||||:|||||:|||||:|
|||||:|||||||:|||||:|

RESULT 13

A60303

vasoactive intestinal peptide - smaller spotted catshark

C;Species: Scyliorhinus canicula (smaller spotted catshark, smaller spotted dogfish)

C;Date: 10-Nov-1992 #sequence revision 10-Nov-1992 #text_change 09-Jul-2004

C;Accession: A60303; A60314; S07432

R;Dimoline, R.; Thwaites, D.T.; Young, J.; Lee, C.M.; Thorndyke, M.C.

Regul. Pept. 18, 356, 1987

A;Title: A novel family of VIP-like peptides from the dogfish Scyliorhinus canicula.

A;Reference number: A60303

A;Accession: A60303

```

A:Molecule type: protein
A:Residues: 1-28 <DIM>
A:Cross-references: UNIPROT:P09585; UNIPARC:UPI000013884B
A>Note: This reference is an abstract
R:Dimaline, R.; Thorndyke, M.C.; Young, J.
Regul. Pept. 14, 1-10, 1986
A:Title: Isolation and partial sequence of elasmobranch VIP.
A:Reference number: A60314; MUID:86234323; PMID:3715063
A:Accession: A60314
A:Molecule type: protein
A:Residues: 1-10 <DI2>
A:Cross-references: UNIPARC:UPI000017652D
R:Dimaline, R.; Young, J.; Thwaites, D.T.; Lee, C.M.; Thorndyke, M.C.
Ann. N. Y. Acad. Sci. 527, 621-623, 1988
A:Title: Amino acid sequence of a biologically active vasoactive intestinal peptide from
A:Reference number: S07432
A:Accession: S07432
A>Status: Preliminary
A:Molecule type: protein
A:Residues: 1-28 <DI3>
A:Cross-references: UNIPARC:UPI000013884B
C:Superfamily: glucagon
C:Keywords: amidated carboxyl end; duplication; intestine; neuropeptide
F:28/Modified site: amidated carboxyl end (Ala) #status experimental

Query Match      84.7%; Score 122; DB 2; Length 28;
Best Local Similarity 81.5%; Pred. No. 3.5e-11;
Matches 22; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMRVKYKYLNSIL 27
   |||||:|||||:|||||:|||||:
DB 1 HSDAVFTDNYSRIRKQMAVKYKYLNSLL 27

RESULT 14
A38232
vasoactive intestinal peptide - North American opossum
N:Alternate names: VIP
C:Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossum)
C>Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004
A:Accession: A38232
R:Eng, J.; Yu, J.; Rattan, S.; Yalow, R.S.
Proc. Natl. Acad. Sci. U.S.A. 89, 1809-1811, 1992
A:Title: Isolation and amino acid sequences of opossum vasoactive intestinal polypeptide
A:Reference number: A38232; MUID:92179271; PMID:1542675
A:Accession: A38232
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-28 <ENG>
A:Cross-references: UNIPROT:P39089; UNIPARC:UPI0000138846
A>Note: sequence extracted from NCBI backbone (NCBIP:87215)
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

Query Match      79.9%; Score 115; DB 2; Length 28;
Best Local Similarity 78.6%; Pred. No. 3.7e-10;
Matches 22; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTRLRKQMRVKYKYLNSILN 28
   |||||:|||||:|||||:|||||:
DB 1 HSDAVFTDYSYTRLLKQMAVRKYLDLSILN 28

RESULT 15
JQ0361
vasoactive intestinal peptide - Atlantic cod (fragment)
C:Species: Gadus morhua (Atlantic cod)
C>Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-Jul-2004
A:Accession: JQ0361
R:Thwaites, D.T.; Young, J.; Thorndyke, M.C.; Dimaline, R.
Regul. Pept. 22, 436, 1988
A:Title: Isolation and characterisation of two teleost VIP's.
A:Reference number: JQ0361

```

```

A:Accession: JQ0361
A:Molecule type: protein
A:Residues: 1-25 <THW>
A:Cross-references: UNIPROT:P09684; UNIPARC:UPI0000138847
C:Superfamily: glucagon
C:Keywords: duplication; intestine; neuropeptide

```

```

Query Match      77.8%; Score 112; DB 2; Length 25;
Best Local Similarity 84.0%; Pred. No. 8.9e-10;
Matches 21; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

```

```

QY 1 HSDAVFTDNYTRLRKQMRVKYKYLNS 25
   |||||:|||||:|||||:|||||:
DB 1 HSDAVFTDNYSRFRKQMAVKYKYLNS 25

```

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Search completed: January 25, 2006, 15:20:38
Job time : 13.25 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: January 25, 2006, 14:54:02 ; Search time 76 Seconds
(without alignments)
259.931 Million cell updates/sec

Title: US-10-626-719-8

Perfect score: 144

Sequence: 1 HSDAVFTDNYTRLRQMKRVKYLNSILN 28

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues

Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

UniProt_05.80.*
1: uniprot_sprot.*
2: uniprot_trembl.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	138	95.8	28	1 VIP_CANFA	P63289 canis famil
2	138	95.8	28	1 VIP_CAPHI	P63290 capra hircu
3	138	95.8	28	1 VIP_MACMU	P84488 macaca mula
4	138	95.8	28	1 VIP_SHEEP	P63291 ovis aries
5	138	95.8	72	1 VIP_PIG	P01284 sus scrofa
6	138	95.8	72	1 VIP_RABIT	P32649 oryctolagus
7	138	95.8	118	2 Q5TCY7 HUMAN	Q5tcy7 homo sapien
8	138	95.8	145	2 Q7M2Y9 MACFA	Q7m2y9 macaca fasc
9	138	95.8	153	2 Q7TSR4 JMURI	Q7tsr4 arvicanthis
10	138	95.8	169	2 Q5TCV8 HUMAN	Q5tcv8 homo sapien
11	138	95.8	170	1 VIP_BOVIN	P81401 bos taurus
12	138	95.8	170	1 VIP_HUMAN	P01282 homo sapien
13	138	95.8	170	1 VIP_MOUSE	P32648 mus musculus
14	138	95.8	170	1 VIP_RAT	P01283 rattus norv
15	138	95.8	170	2 Q5TCV9 HUMAN	Q5tcv9 homo sapien
16	138	95.8	171	2 Q9D2Z7 MOUSE	Q9d2z7 mus musculu
17	125	86.8	72	1 VIP_CAVPO	P04566 cavia porce
18	123	85.4	28	1 VIP_ALLMI	P48142 alligator m
19	123	85.4	28	1 VIP_RANRI	P81016 rana ridibu
20	123	85.4	70	2 Q4TZK3 ANAPL	Q4tzk3 anas platyr
21	123	85.4	86	2 Q4TZV9 AVES	Q4tzv9 anser anser
22	123	85.4	200	1 VIP_CHICK	P48143 gallus gall
23	123	85.4	200	1 VIP_MELGA	P45644 meleagris g
24	123	85.4	202	2 Q7ZYGB XENLA	Q7zygb xenopus lae
25	122	84.7	28	1 VIP_SCYCA	P09685 scyllorhinu
26	122	84.7	28	2 Q9PR19 AMICA	Q9pr19 ania calva
27	122	84.7	147	2 Q4SQN2 TETNG	Q4sqn2 tetraodon n
28	118	81.9	28	2 Q9PRN8 CARAU	Q9prn8 carassius a
29	115	79.9	28	1 VIP_DIDMA	P39089 didelphis m
30	112	77.8	25	1 VIP_GADMO	P09684 gadus morhu
31	105	72.9	38	2 Q75W85 MISA	Q75w85 misgurnus a

32	102	70.8	172	2 Q9DE29 BRARE	Q9de29 brachydanio
33	102	70.8	199	2 Q5XJ29 BRARE	Q5xj29 brachydanio
34	101	70.1	38	2 Q75W94 HALRO	Q75w94 halocynthia
35	101	70.1	38	2 Q8IU36 PERAM	Q8iu36 periplaneta
36	101	70.1	38	2 Q8IU37 SEPLE	Q8iu37 sepioteuthi
37	101	70.1	38	2 Q8IU38 HYDMA	Q8iu38 hydra magni
38	101	70.1	38	2 Q8IU39 DUGJA	Q8iu39 dugesia jap
39	101	70.1	38	2 Q75W87 ONCMY	Q75w87 oncorhynch
40	101	70.1	38	2 Q75W90 STELE	Q75w90 sardinops m
41	101	70.1	38	2 Q75W92 PERC	Q75w92 stephanolep
42	101	70.1	38	2 Q8AYP4 ACISC	Q8ayp4 acipenser s
43	101	70.1	38	2 Q8AYP5 TRAJP	Q8ayp5 trachurus j
44	101	70.1	62	2 Q53B12 PRIM	Q53b12 gorilla gor
45	101	70.1	62	2 Q53B13 PONPY	Q53b13 pongo pygma

ALIGNMENTS

RESULT 1

ID	VIP	CANFA	STANDARD	PRT	28 AA
AC	P63289	P04565			
DT	13-AUG-1987	(Rel. 05, Created)			
DT	13-AUG-1987	(Rel. 05, Last sequence update)			
DT	13-SEP-2005	(Rel. 48, Last annotation update)			
DE	Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide).				
GN	Name:VIP;				
OS	Canis familiaris (Dog).				
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Canidae;				
OC	Canis.				
OX	NCBI_TaxID=9615;				
RN	[1]				
RP	PROTEIN SEQUENCE.				
RX	MEDLINE=86313167; PubMed=3748846; DOI=10.1016/0196-9781(86)90158-0;				
RA	Eng J.; Du B.-H.; Raufman J.-P.; Yalow R.S.;				
RT	"Purification and amino acid sequences of dog, goat and guinea pig VIPs.";				
RL	Peptides 7 Suppl. 1:17-20(1986).				
CC	-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.				
CC	-!- SUBCELLULAR LOCATION: Secreted.				
CC	-!- SIMILARITY: Belongs to the glucagon family.				
CC	-----				
CC	This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.				
CC	-----				
DR	PIR; A60304; A60304.				
DR	HSSP; P18509; IGEA.				
DR	Ensembl; ENSCAFG0000000538; Canis familiaris.				
DR	InterPro; IPR000532; Glucagon.				
DR	Pfam; PF00123; Hormone_2; 1.				
DR	PRINTS; PR00275; GLUCAGON.				
DR	SMART; SM00070; GLUCA; 1.				
DR	PROSITE; PS00260; GLUCAGON; 1.				
KW	Amidation; Direct protein sequencing; Glucagon family; Hormone.				
FT	MOD RSS 28 28 Asparagine amide.				
SQ	SEQUENCE 28 AA; 3327 MW; EF313F8573FF6F3F CRC64;				

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTRLRQMKRVKYLNSILN 28

|||||

1 HSDAVFTDNYTRLRQMKRVKYLNSILN 28

|||||

Regul. Pept. 38:145-154(1992).
-!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
-!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the glucagon family.

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PIR; B60072; VRSH.
HSSP; P18509; 1GEA.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; Hormone_2; 1.
PRINTS; PR00275; GLUCAGON.
SMART; SM00070; GLUCA; 1.
PROSITE; PS00260; GLUCAGON; 1.
Amidation; Direct protein sequencing; Glucagon family; Hormone.
MOD RES 28 Asparagine amide.
SEQUENCE 28 AA; 3327 MW; EF313FB573FF6F3F CRC64;

Query Match 95.8%; Score 138; DB 1; Length 28;
Best Local Similarity 96.4%; Pred. No. 1.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28

RESULT 5
ID_VIP_PIG STANDARD; PRT; 72 AA.
AC P01284; QSTRN0;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
OC Sus.
OX NCBI_TaxID=9823;
RN [1]
RP PROTEIN SEQUENCE OF 1-27.
RX MEDLINE=82082498; PubMed=6947244;
RA Tatamoto K., Mutt V.;
RT "Isolation and characterization of the intestinal peptide porcine PHI (PHI-27), a new member of the glucagon-secretin family.";
RL Proc. Natl. Acad. Sci. U.S.A. 78:6603-6607(1981).
RN [2]
RP PROTEIN SEQUENCE OF 1-24.
RC TISSUE=Duodenum;
RX MEDLINE=93038640; PubMed=1329741;
RA Ichiki Y., Kitamura K., Kangawa K., Kawamoto M., Matsuo H., Eto T.;
RT "Organ distribution and characterization of porcine peptides (VIP, CGRP and PHI) that increase cAMP in rat platelets";
RL Biochem. Biophys. Res. Commun. 187:1587-1593(1992).
RN [3]
RP PROTEIN SEQUENCE OF 28-58.
RX MEDLINE=88335763; PubMed=2843830; DOI=10.1016/0196-9781(88)90149-0;
RA Gafvelin G., Andersson M., Dimaline R., Jornvall H., Mutt V.;
RT "Isolation and characterization of a variant form of vasoactive intestinal polypeptide";
RL Peptides 9:469-474(1988).
RN [4]
RP PROTEIN SEQUENCE OF 45-72.

RX MEDLINE=74167323; PubMed=4829446;
RA Mutt V., Said S.I.;
RT "Structure of the porcine vasoactive intestinal octacosapeptide. The amino-acid sequence. Use of kallikrein in its determination.";
RL Eur. J. Biochem. 42:581-589(1974).
RN [5]
RP SYNTHESIS OF VIP.
RX MEDLINE=74308014; PubMed=4854585;
RA Bodanszky M., Klausner Y.S., Lin C.Y., Mutt V., Said S.I.;
RT "Synthesis of the vasoactive intestinal peptide (VIP).";
RL J. Am. Chem. Soc. 96:4973-4978(1974).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.

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PIR; A01549; VRPG.
HSSP; P18509; 1GEA.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; Hormone_2; 2.
PRINTS; PR00275; GLUCAGON.
PROSITE; PS00260; GLUCAGON; 2.
Amidation; Cleavage on pair of basic residues; Glucagon family; Hormone.
KW Direct protein sequencing; Glucagon family; Hormone.
FT PEPTIDE 1 27 Intestinal peptide PHI-27.
FT PEPTIDE 45 72 Vasoactive intestinal peptide.
FT MOD RES 27 27 Isoleucine amide.
FT MOD RES 72 72 Asparagine amide.
FT NON_TER 1 1
FT NON_TER 72 72
SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0E5C1CA3A CRC64;

Query Match 95.8%; Score 138; DB 1; Length 72;
Best Local Similarity 96.4%; Pred. No. 3.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
Db 45 HSDAVFTDNYTLRKQMKVKKYLSILN 72

RESULT 6
ID_VIP_RABIT STANDARD; PRT; 72 AA.
AC P32649;
DT 01-OCT-1993 (Rel. 27, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)] (Fragment).
GN Name=VIP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Lagomorpha; Leporidae;
OC Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP PROTEIN SEQUENCE.
RC TISSUE=Small intestine;
RX MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J., Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;

"Amino acid sequence of VIP, PHI and secretin from the rabbit small intestine.",
 Peptides 11:123-128(1990).
 CC -1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
 stimulates myocardial contractility, increases glycogenolysis and
 relaxes the smooth muscle of trachea, stomach and gall bladder.
 CC -1- FUNCTION: PHI also causes vasodilation.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- MISCELLANEOUS: X's at positions 28 to 44 were included by homology
 with the human precursor sequence.
 CC -1- SIMILARITY: Belongs to the glucagon family.

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 between the Swiss Institute of Bioinformatics and the EMBL outstation -
 the European Bioinformatics Institute. There are no restrictions on its
 use as long as its content is in no way modified and this statement is not
 removed.
 CC -----
 DR HSSP; P18509; IGEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 KW Amidation; Cleavage on pair of basic residues;
 Direct protein sequencing; Glucagon family; Hormone.
 FT PEPTIDE 1 27
 FT 45 72 Intestinal peptide PHI-27.
 FT MOD_RES 27 27 Vasoactive intestinal peptide.
 FT MOD_RES 72 72 Isoleucine amide.
 FT MOD_RES 72 72 Asparagine amide.
 FT NON_TER 1 1
 FT NON_TER 72 72
 SQ SEQUENCE 72 AA; 8198 MW; EF03B1F0B5C1CA3A CRC64;

 Query Match 95.8%; Score 138; DB 1; Length 72;
 Best Local Similarity 96.4%; Pred. No. 3.4e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 DB 45 HSDAVFTDNYTLRKQMKVKKYLSILN 72

 RESULT 7
 Q5TCY7 HUMAN
 ID Q5TCY7 HUMAN PRELIMINARY; PRT; 118 AA.
 AC Q5TCY7;
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
 DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
 DE Vasoactive intestinal peptide (Fragment).
 GN Name=VIP; ORFNames=RP4-546K19.1-003;
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
 OC Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Johnson C.;
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AL133356; CAI21766.1; -, Genomic DNA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR SMART; SM00070; GLUC; 2.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 118 118
 SQ SEQUENCE 118 AA; 13385 MW; D1BC9C4459FC2D95 CRC64;

 Query Match 95.8%; Score 138; DB 2; Length 118;
 Best Local Similarity 96.4%; Pred. No. 5.7e-12;

Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 DB 74 HSDAVFTDNYTLRKQMKVKKYLSILN 101

 RESULT 8
 Q7M2Y9 MACFA
 ID Q7M2Y9 MACFA PRELIMINARY; PRT; 145 AA.
 AC Q7M2Y9;
 DT 01-MAR-2004 (TrEMBLrel. 26, Created)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal peptide precursor (Fragment).
 OS Macaca fascicularis (Crab eating macaque) (Cynomolgus monkey).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
 CC Cercopithecoidea; Cercopithecoidea; Macaca.
 OX NCBI_TaxID=9541;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RX MEDLINE=91203476; PubMed=1850073; DOI=10.1016/0169-328X(91)90145-N;
 RA Benson D.L.; Isackson P.J.; Jones E.G.;
 RT "In situ hybridization reveals VIP precursor mRNA-containing neurons
 in monkey and rat neocortex."
 RL Brain Res. Mol. Brain Res. 9:169-174(1991).
 DR PIR; A60038; A60038.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.
 DR PROSITE; PS00260; GLUCAGON; 2.
 FT NON_TER 1 1
 FT NON_TER 145 145
 SQ SEQUENCE 145 AA; 16324 MW; 1ABE5D98D853FE5C CRC64;

 Query Match 95.8%; Score 138; DB 2; Length 145;
 Best Local Similarity 96.4%; Pred. No. 7.1e-12;
 Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
 DB 100 HSDAVFTDNYTLRKQMKVKKYLSILN 127

 RESULT 9
 Q7TSR4 9MURI
 ID Q7TSR4 9MURI PRELIMINARY; PRT; 153 AA.
 AC Q7TSR4;
 DT 01-OCT-2003 (TrEMBLrel. 25, Created)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
 DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
 DE Vasoactive intestinal polypeptide (Fragment).
 OS Arvicanthia ansorgei.
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
 CC Muridae; Murinae; Arvicanthis.
 OX NCBI_TaxID=204747;
 RN [1]
 RP NUCLEOTIDE SEQUENCE.
 RA Dardente H.; Menet J.S.; Tournier B.B.; Challet E.; Pevet P.;
 RA Masson-Pevet M.;
 RL Submitted (JAN-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AY225375; AAP15167.1; -, mRNA.
 DR HSSP; P18509; IGEA.
 DR GO; GO:0005576; C:extracellular region; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR000532; Glucagon.
 DR Pfam; PF00123; Hormone 2; 2.
 DR PRINTS; PR00275; GLUCAGON.


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DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
FR NON TER
SQ SEQUENCE 153 AA; 17171 MW; 9C15095D6E147A15 CRC64;

Query Match          95.8%; Score 138; DB 2; Length 153;
Best Local Similarity 96.4%; Pred. No. 7.5e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
    |||||
Db 108 HSDAVFTDNYTLRKQMKVKKYLSILN 135

RESULT 10
QSTCY8 HUMAN
ID QSTCY8 HUMAN PRELIMINARY; PRT; 169 AA.
AC QSTCY8;
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
OS Name=VIP; ORFNames=RP4-546K19.1-002;
GN Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21765.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 169 AA; 19081 MW; F325BDFEP47132C3 CRC64;

Query Match          95.8%; Score 138; DB 2; Length 169;
Best Local Similarity 96.4%; Pred. No. 8.3e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
    |||||
Db 124 HSDAVFTDNYTLRKQMKVKKYLSILN 151

RESULT 11
VIP_BOVIN
ID -VIP BOVIN STANDARD; PRT; 170 AA.
AC P81401; Q8MI77;
DT 15-DEC-1998 (Rel. 37, Created)
DT 25-OCT-2004 (Rel. 45, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-27 (Peptide histidine isoleucinamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
OS Bos taurus (Bovine);
GN Bos taurus (Bovine);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Hamelink C.; Lee H.-W.; Chen Y.; Grimaldi M.; Biden L.E.;
RT "Coincident elevation of cAMP and calcium influx by PACAP-27 synergistically regulates vasoactive intestinal polypeptide gene transcription through a novel PKA-independent signaling pathway.";
RL J. Neurosci. 22:5310-5320(2002).
RN [2]
RP PROTEIN SEQUENCE OF 81-107.
RC TISSUE=Duoenum;

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RX MEDLINE=85027215; PubMed=6548446;
RA Carlquist M., Kaiser R., Tatemoto K., Joernvall H., Mutt V.;
RT "A novel form of the polypeptide PHI isolated in high yield from bovine upper intestine. Relationships to other peptides of the glucagon-secretin family.";
RL Eur. J. Biochem. 144:243-247(1984).
RN [3]
RP PROTEIN SEQUENCE OF 125-152.
RC TISSUE=Intestine;
RX MEDLINE=80092152; PubMed=520589; DOI=10.1016/0014-5793(79)80587-6;
RA Carlquist M., Mutt V., Joernvall H.;
RT "Isolation and characterization of bovine vasoactive intestinal peptide (VIP).";
RL FEBS Lett. 108:457-460(1979).
RN [4]
RP FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contractility, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- MISCELLANEOUS: X's at positions 28 to 44 were included by homology with the human precursor sequence.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use as long as its content is in no way modified and this statement is not removed.
CC EMBL; AF503910; AM28152.1; -; mRNA.
CC HSPF; P18509; IGEA.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR SMART; SM00070; GLUCA; 2.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 25 Potential.
FT PROPEP 26 79 Intestinal peptide PHI-27.
FT PEPTIDE 81 107
FT PROPEP 111 122
FT PEPTIDE 125 152 Vasoactive intestinal peptide.
FT PROPEP 156 170
FT MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).
FT MOD_RES 152 152 Asparagine amide (G-153 provides amide group).
FT SEQUENCE 170 AA; 19165 MW; 9C6A6049AF7BFF81 CRC64;

Query Match          95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
    |||||
Db 125 HSDAVFTDNYTLRKQMKVKKYLSILN 152

RESULT 12
VIP_HUMAN
ID -VIP HUMAN STANDARD; PRT; 170 AA.
AC P01282; Q96QK3;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: intestinal peptide PHI-42; Intestinal peptide PHM-27 (Peptide histidine methioninamide 27); Vasoactive intestinal peptide (VIP) (Vasoactive intestinal polypeptide)].
GN Name=VIP;
OS Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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DR EMBL; M54930; AAA63268.1; -; mRNA.
DR EMBL; M3162; AAA61285.1; -; Genomic_DNA.
DR EMBL; M31645; AAA61285.1; JOINED; Genomic_DNA.
DR PIR; A23296; VRHU.
DR HSSP; P18509; IGEA.
DR Ensembl; ENSG00000146469; Homo sapiens.
DR HGNC; HGNC:12693; VIP.
DR H-InVDB; HIX0006306; -.
DR MIM; 192320; -.
DR GO; GO:0005184; F:neuropeptide hormone activity; TAS.
DR GO; GO:0007589; P:fluid secretion; TAS.
DR GO; GO:0007186; P:G-protein coupled receptor protein signalin...; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone_2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Hormone; Signal.
FT SIGNAL 1 20 Potential.
FT PROPEP 21 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT CONFLICT 96 97 Qu -> PP (in Ref. 7).
FT CONFLICT 113 113 Missing (in Ref. 6).
FT CONFLICT 116 116 S -> L (in Ref. 4).
FT CONFLICT 136 136 R -> G (in Ref. 4).
SQ SEQUENCE 170 AA; 19169 MW; 938C0177F89508FD CRC64;

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKYKLSILN 152

RESULT 13
VIP_MOUSE STANDARD; PRT; 170 AA.
AC P32648;
DT 01-OCT-1993 (Rel. 27, Created)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
RT polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 1-36
RC STRAIN=C57BL/6; TISSUE=Spleen;
RX MEDLINE=95201289; PubMed=7894056;
RA Sena M., Bravo D.T., Agoston D., Waschek J.A.;

```

"High conservation of upstream regulatory sequences on the human and mouse vasoactive intestinal peptide (VIP) genes.";

-1- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure, stimulates myocardial contraction, increases glycogenolysis and relaxes the smooth muscle of trachea, stomach and gall bladder.

-1- FUNCTION: PHM also causes vasodilation.

-1- SUBCELLULAR LOCATION: Secreted.

-1- SIMILARITY: Belongs to the glucagon family.

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EMBL; X74297; CAA52350.1; -; Genomic_DNA.

PIR; A60037; A60037.

HSSP; P18509; IGEA.

Ensembl; ENSMUSG000000019772; Mus musculus.

MGI; MGI:98933; Vip.

GO; GO:0005615; C:extracellular space; TAS.

InterPro; IPR000532; Glucagon.

Pfam; PF00123; Hormone_2; 2.

PRINTS; PR00275; GLUCAGON.

PROSITE; PS00260; GLUCAGON; 2.

Amidation; Cleavage on pair of basic residues; Glucagon family; Glycoprotein; Hormone; Signal.

SIGNAL 1 21 By similarity.

PROPEP 22 79

PEPTIDE 81 122 Intestinal peptide PHI-42 (By similarity).

PEPTIDE 81 107 Intestinal peptide PHI-27.

PEPTIDE 125 152 Vasoactive intestinal peptide.

PROPEP 156 170

MOD_RES 107 107 Isoleucine amide (G-108 provides amide group).

MOD_RES 152 152 Asparagine amide (G-153 provides amide group).

CARBOHYD 133 133 N-linked (GlcNAc...) (Potential).

SEQUENCE 170 AA; 19049 MW; 0164C831F8F5C73D CRC64;

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Oy 1 HSDAVFTDNYTLRKQMRVKYKLSILN 28
Db 125 HSDAVFTDNYTLRKQMAVKYKLSILN 152

RESULT 14
VIP_RAT STANDARD; PRT; 170 AA.
AC P01283;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1993 (Rel. 27, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE VIP peptides precursor [Contains: Intestinal peptide PHI-42;
DE Intestinal peptide PHI-27 (Peptide histidine isoleucineamide 27);
DE Vasoactive intestinal peptide (VIP) (Vasoactive intestinal
DE polypeptide)].
GN Name=Vip;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].
RX MEDLINE=90244869; PubMed=2159586; DOI=10.1016/0169-328X(90)90036-D;
RA Giladi E., Shani Y., Gozes I.;
RT "The complete structure of the rat VIP gene.";

```
RL Brain Res. Mol. Brain Res. 7:261-267(1990).
RN [2]
RP NUCLEOTIDE SEQUENCE OF 9-170.
RC TISSUE=Brain cortex;
RA MEDLINE=85154612; PubMed=3838518; DOI=10.1016/0014-5793(85)80953-4;
RX Nishizawa M., Hayakawa Y., Yanaiharu N., Okamoto H.;
RT "Nucleotide sequence divergence and functional constraint in VIP
precursor mRNA evolution between human and rat.";
RL FEBS Lett. 183:55-59(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 78-155.
RX MEDLINE=91232388; PubMed=1851524; DOI=10.1016/0169-328X(91)90005-1;
RA Lamperti E.D., Rosen K.M., Villa-Komaroff L.;
RT "Characterization of the gene and messages for vasoactive intestinal
polypeptide (VIP) in rat and mouse.";
RL Brain Res. Mol. Brain Res. 9:217-231(1991).
RN [4]
RP PROTEIN SEQUENCE OF 134-152.
RX MEDLINE=88243784; PubMed=3379062;
RA Goetzl E.J., Sreedharan S.P., Turck C.W.;
RT "Structurally distinctive vasoactive intestinal peptides from rat
basophilic leukemia cells.";
RL J. Biol. Chem. 263:9083-9086(1988).
CC -!- FUNCTION: VIP causes vasodilation, lowers arterial blood pressure,
stimulates myocardial contractility, increases glycolysis and
relaxes the smooth muscle of trachea, stomach and gall bladder.
CC -!- FUNCTION: PHI also causes vasodilation.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the glucagon family.
CC -----
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the European Bioinformatics Institute. There are no restrictions on its
use as long as its content is in no way modified and this statement is not
removed.
CC -----
DR EMBL; X02341; CAA26200.1; -; mRNA.
DR PIR; A60053; VRRT.
DR HSP; P18509; LGEA.
DR Ensembl; ENSRNOG0000018808; Rattus norvegicus.
DR RGD; 621647; Vip.
DR GO; GO:0042311; P:vasodilation; NAS.
DR InterPro; IPR000532; Glucagon.
DR Pfam; PF00123; Hormone 2; 2.
DR PRINTS; PR00275; GLUCAGON.
DR PROSITE; PS00260; GLUCAGON; 2.
KW Amidation; Cleavage on pair of basic residues;
KW Direct protein sequencing; Glucagon family; Glycoprotein; Hormone;
KW Signal.
FT SIGNAL 1 21
FT PROPEP 22 79
FT PEPTIDE 81 122
FT PEPTIDE 81 107
FT PEPTIDE 125 152
FT PROPEP 156 170
FT MOD_RES 107 107
FT MOD_RES 152 152
FT CARBOHYD 68 68
FT CARBOHYD 133 133
SQ SEQUENCE 170 AA; 19079 MW; 202AE82EBBD190B CRC64;

Query Match 95.8%; Score 138; DB 1; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMKVKKYLSILN 152

Search completed: January 25, 2006, 15:18:40
Job time : 76 secs
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RESULT 15
QSTCY9 HUMAN PRELIMINARY; PRT; 170 AA.
AC QSTCY9_
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DT 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)
DE Vasoactive intestinal peptide.
GN Name=VIP; ORFNames=RP4-546K19.1-001;
OS Homo sapiens (Human);
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Johnson C.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
DR EMBL; AL133356; CAI21764.1; -; Genomic DNA.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
SQ SEQUENCE 170 AA; 19168 MW; 93EC0177F89508FD CRC64;

Query Match 95.8%; Score 138; DB 2; Length 170;
Best Local Similarity 96.4%; Pred. No. 8.4e-12;
Matches 27; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 HSDAVFTDNYTLRKQMKVKKYLSILN 28
DB 125 HSDAVFTDNYTLRKQMKVKKYLSILN 152

Search completed: January 25, 2006, 15:18:40
Job time : 76 secs
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